Editorial

I am pleased to introduce this new issue of *Greek and Roman Musical Studies*, a paradigmatic example of how scholarly research on music in Classical antiquity is currently lively and productive. The broad range of topics and historical periods covered by the following articles is outstanding.

We start with three papers on musical myths in Greek and Roman antiquity investigated from different perspectives. The first of them is the lecture delivered by our Founding Editor, Andrew Barker, at the inaugural "Martin West Memorial Lecture" in Oxford, which gives a brilliant reading of the poetic occurence of the 'Libyan *aulos*' in tragic poetry, putting ancient Greek musical culture in a broader geographical context. In the second article, Pauline LeVen analyses the myth of Echo in Ovidian poetry emphasizing the allusive richness of the verbal material through which this myth is expressed and interpreting it as a reflection on the nature of the voice. This section is closed by the large and informative catalogue, illustrated by María Isabel Rodríguez and Claudina Romero Mayorga, of the representations of centaur-musicians in Classical iconography.

The core of GRMS 6.1 is, then, devoted to a report on a remarkable event that occured in Cuma (Italy) in June 2016: the first international symposium explicitly dedicated to the music of Augustan Rome, entitled "Music in the Time of Vergil". Timothy Moore, organizer of the successfull conference, which was sponsored by the Vergilian Society and attracted scholars from all over the world, gives a comprehensive account of the program, highlighting the manifold directions in which promising research has been (and still continues to be) done on the topic. His report is followed by three more specific examples of how verbal and visual musical imagery, both in Latin poetry (Deborah Beck and Kamila Wyslucha) and in private art (Daniela Castaldo), responded to and elaborated upon the new political and cultural instances of the Augustan age.

The next batch of papers analyzes in depth some important technical works of late antiquity. Egert Pöhlmann's clear and meticulous description of the so-called Bellermann's *Anonymi* (an agglomeration of five musical handbooks compiled from different sources) is followed by Stefan Hagel's brilliant interpretation of the 'instrumental exercises' that have been transmitted within these texts, intended as musical pieces which had the purpose of training in

various techniques the beginners in the art of the *aulos*. The modern editor of the Bellermann's *Anonymi* himself, Dietmar Najock, is author of the following article on the *koinē hormasia*, a table with Greek note symbols preserved in a manuscript of the 11th century AD, probably meant to provide a meantone tuning and a basic system for playing two voices on stringed instruments. Finally, the last pair of articles go deeper into rhythmical questions, formulating new interpretative hypotheses on ancient technical terminology in matters of rhythm (Marco Ercoles on *antistrophos*) and exploring the influence of Greek metre and rhythm on modern music (Konstantine Panegyres).

I would like to thank all my colleagues on the Editorial Board (first and foremost Timothy Moore, who has done a great deal to realize this specific issue), the members of our publisher's staff and especially the authors who, with their expertise and passion, continue to contribute so remarkably to the development of this discipline.

    Eleonora Rocconi

BRILL

Migrating Musical Myths
The Case of the Libyan Aulos

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Abstract

Allusions to the 'Libyan *aulos*' or 'Libyan *lōtos*' are quite common in Euripides, but occur nowhere in earlier texts and only sporadically later. The identity of the instrument to which these unusual expressions refer is something of a mystery. I argue that it cannot be a special kind of instrument distinct from the familiar *aulos*, but that the designation reflects a mythological tradition, difficult but by no means impossible to trace in our sources, according to which the *aulos* and its music originated in North Africa rather than in Phrygia, where the more familiar legends locate it.

Keywords

I'm acutely aware that being asked to deliver the first of these lectures in memory of Martin West is a considerable honour, and I'm duly grateful for the implication that I'm a fit person to do it.[1] But at the same time the actual presentation of it is a pretty daunting task. Not only am I addressing an audience consisting largely of highly accomplished classicists who can be expected to distinguish dross from gold; I am also standing squarely in the shadow of one of the most distinguished classical scholars the world has seen since the

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1 This essay was presented (Oxford, 2 March 2017) as the inaugural Martin West Memorial Lecture. I have eliminated one or two inelegant phrases, but apart from that, in the belief that readers of this journal might like to see the piece in its original form, I have not altered the text I delivered on that occasion. Nor have I embroidered it with clusters of references to scholarly literature which, when I wrote the paper, I had not in fact read.

beginning of the 20th century. I cannot hope to emulate the penetrating acu-
ity of his scholarship, the extraordinary range of his interests, knowledge and
expertise, his remarkable interpretative insight, his often beguiling and some-
times devastating deployment of the English language, or indeed any of the
other skills which he put to such admirable use.

But Professor West is no longer with us, and for this evening you will have to
put up with me instead. My project is not to celebrate his work by passing his
achievements and publications in review; many of you knew him better than
I did, and I've no doubt that most of you have studied a substantial number
of his publications and formed your own opinions about them. I shall seek to
honour his memory in another way, by offering a few thoughts of my own on
a puzzle that arises in one of his main areas of interest, that of Greek music.
No matter how he might have reacted to my proposals, I'm sure he would have
agreed that while the puzzle itself is hardly of earth-shattering importance, it's
an intriguing little conundrum and deserves at least a modest dose of scholarly
attention.

I can't resist starting, however, with a side-glance at an article of his that
was published posthumously, at the end of last year, in an issue of the Italian
journal *Eikasmós* (West 2016). Though it appeared so recently, it is in fact the
unrevised text of a paper he presented at two conferences in 2011, and it encap-
sulates, with West's characteristic combination of erudition, close reasoning,
constructive imagination and wit, some of the main themes and arguments
of the book on the *Odyssey* that he published three years later (West 2014).
The central contention of the article, which is called 'Odysseus re-routed', is
that in the course of the *Odyssey*'s composition, the poet changed his mind
about some of its major features; and in particular that he transferred the bulk
of Odysseus' adventures from the Eastern Mediterranean, where he had origi-
nally located them, to little-known regions in the far West, at the same time
adding to them a collection of episodes derived from the legend of Jason and
the Argonauts, whose traditional location, from a Greek perspective, was in the
North or North-East, in the area of the Black Sea.

I mention this only because, by coincidence or otherwise, something rather
similar seems to have happened—or so I shall try to persuade you—in the case
that I want to discuss, in which the two central characters are Euripides and a
musical instrument. There's nothing unusual about a Euripidean reference to
an instrument, simply as such; in the course of his tragedies he scatters musi-
cal allusions, and allusions to instruments in particular, more lavishly, I think,
than any other poet of the period, with the possible exception of Pindar. And
it's no surprise, either, that the instruments that appear most often in his plays
are *auloi*. These double-reed pipes, always played in pairs, were capable of a

remarkable repertoire of tonal variations and expressive effects, not to mention a considerable volume of sound; their music could stimulate emotions ranging from desolate grief to joyful merriment, from terror to relaxed conviviality; they could induce religious frenzy or quasi-magical trance, or sound the marching-tune for troops going into battle. They were the staple instruments of musical entertainment at symposia, and in informal dancing and general jollification; they were integral to a multitude of religious ceremonies; they were the regular accompanying instruments for almost every genre of public song and dance, including of course the songs and dances of tragedy and comedy; and they were the protagonists of the only genre of purely instrumental public music that achieved significant status in Greek culture, the colourful and dramatic *aulētikos nomos* most famously performed in the Pythian games at Delphi. In short, the *auloi* were a prominent and essential presence in Greek life, and their expressive and affective powers lent themselves very naturally to exploitation as points of reference by speakers and singers on the tragic stage.

But Euripides gives some of his references to the *aulos* an unexpected twist by presenting it with a geographical epithet, calling it the Libyan *aulos* or—equivalently—the Libyan *lōtos*, or sometimes simply the *lōtos*, a designation in which the epithet 'Libyan' is certainly implied. The name *lōtos* itself need not detain us long, and the Libyan associations of things called *lōtoi* need no elaborate explanation either. Theophrastus gives us the information, in his *Historia plantarum* (4.3.1-3), that *lōtos* is the name of a tree whose finest and most numerous specimens grow in Libya (4.3.1), and from whose wood *auloi* and other things were made (4.3.4). In another passage (4.2.5) he says that its wood is dark-coloured, strong and attractive, and is used for making statuettes, and miniature tables and beds. The tree in question is probably *Celtis australis*, whose wood—according to information I've gathered from various websites—is tough, pliable, durable and widely used by wood-turners; it is indeed sometimes used for modern reproductions of the ancient *auloi*, including some in the formidable organological arsenal of Stefan Hagel in Vienna, admirable instruments which I have seen and heard him play on many occasions. The practice of naming the instrument itself by calling it the *lōtos* is again unproblematic; it is paralleled in the ways in which other instruments are quite commonly designated, as when a rustic pipe or a *syrinx* is called "the reed", *kalamos*, or when Euripides calls cymbals "the bronze", *chalkos* (*Hel.* 1346). If there was a wind instrument that came from Libya, there would therefore be nothing to puzzle us in the fact that it was sometimes designated as the *lōtos*.

But these ways of indicating the instrument pose several difficult problems. To begin with, there are no references to it by these names in Greek literature before Euripides himself, and remarkably few even in later writings. If such

designations turned up only once or twice in his plays, or only in one short period of his output, we might dismiss them as no more than a passing quirk and leave it at that, but this is not the case. If we put together the three forms of reference, Libyan *aulos*, Libyan *lōtos* and *lōtos* unqualified, there are thirteen instances in all; the first is in his *Alcestis*, which was produced on the Athenian stage in 438 BC, and the rest are scattered among a total of ten different plays throughout the remaining 30 years of his career, right down to the *Iphigenia in Aulis* of about 406 BC, the year in which he is thought to have died.[2] No other writer uses any of the relevant expressions in any surviving Greek literature until the end of the fourth century; after that they appear from time to time, but only very occasionally, in poems and other writings of various sorts, including the two famous paeans by Athenian composers that were performed at Delphi in the late 2nd century BC, and whose words and music were inscribed there, on the wall of the Athenian treasury (they are now in the Delphi Museum).[3] Yet despite the fact that no other contemporary, precursor or immediate successor of Euripides is known to have used the expressions 'Libyan *aulos*', 'Libyan *lōtos*' or unadorned '*lōtos*' to refer to an instrument, Euripides seems to assume that they would be immediately understood and needed no explanation. He writes as though the names were already in common use, or at least as though everyone in his audience would know what he meant by them, and would recognise why it was appropriate to refer to the instruments they designate in these ways, at the points in the plays where they are mentioned. If we are to explain their appearance in Euripides' tragedies, one thing we must take into account is the fact that despite the absence of any earlier references, Euripides' audiences must have been in a position to understand the expressions he uses.

As a first, very simple and reductive explanation of these facts, we might guess that some special kind of *aulos* had in fact been introduced into Greece from North Africa shortly after the middle of the fifth century, that it had distinctive and easily recognisable features, and that it had enough success to impress itself on general public consciousness, first, perhaps, in Athens and later elsewhere. But this hypothesis faces difficulties which I think are insuperable. In the first place, leaving Euripides on one side, there is absolutely no evidence for the introduction of any such instrument around the time in question. Secondly, when later scholars, specifically Athenaeus (182d-e) and Pollux (4.74), try to identify the so-called Libyan *lōtos* or *aulos*, they assign the

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2   The complete list: *Alc.* 346f., *Tr.* 544, *HF* 11 and 684, *Heracl.* 892, *El.* 716, *Ph.* 787, *Hel.* 170, *Ba.* 160 and 687, *IA* 438 and 1036, *Erechth.* fr. 370,8 K.

3   Pöhlmann-West 2001, no's 2of.

name to an instrument that is most unlikely to be the one that Euripides had in mind. It is the transverse pipe also called the *plagiaulos* or *phōtinx*, specifically the kind commonly played in Egypt, which seems not have been a reed instrument at all but a variety of flute. Such instruments do not appear to have had any public profile in fifth-century Greece, and it is in the last degree improbable that they would have been thought appropriate to the contexts in which Euripides' allusions occur—I'll say a bit more about those contexts in a moment. The same passage of Pollux attributes the invention of another kind of *aulos* to the Libyans too, but that is an even less plausible candidate: it is the *hippophorbos aulos*, which was used by the Libyan 'tent-dwellers' or nomads to call their horses. Pollux says that it was made from a stick of the tree called *daphnē* with the bark removed and the pith extracted, and that it makes a high-pitched *ēchos*. It was evidently a very primitive instrument, perhaps just a simple whistle.

The hypothesis of a recently introduced instrument, with striking features that marked it off clearly from the *auloi* already familiar in the Greek world, is further discouraged, and the whole situation made even more puzzling, by the fact that Euripides gives no indication that the instrument he mentions has any specifically Libyan features which distinguish it from the general run of *auloi*. Nor does it seem from his allusions that it is used in contexts of some special sort, or that the quality of its sound was in any way exceptional; on the contrary, Euripides uses one or other of the expressions we are considering in the *majority* of his references to the *aulos*, with thirteen occurrences against only eight in which it is *not* called either Libyan or 'the *lōtos*' or both; and this suggests quite strongly that the expressions refer to instruments of a perfectly normal type. So far as we can tell, the names are being used to refer to the ordinary *aulos* which had already been central to Greek music-making for at least two hundred years.

Just about any of Euripides' allusions could be used to illustrate these points, but let's take the least well known of the passages in which such references appear, a fragment of his *Erechtheus* (fr. 370,8 K.). The Chorus, evidently made up of old Athenian men, sees a messenger coming from the battlefield where Erechtheus and his army have been fighting the army of Eleusis. They wonder whether the news will be good, so that if it is they can sing songs of victory around the city with the sounds of the Libyan *lōtos* and the *kithara*, followed by dancing maidens. The epithet 'Libyan' seems to serve no identifiable purpose here at all, and there's apparently no reason why this *lōtos* should not be an *aulos* of the familiar sort, which is regularly mentioned in other passages in tragedy where celebrations of these kinds are described. Much the same is true of all the other references in his plays. In the *Alcestis*, for instance, the Libyan

lōtos accompanies exclamations of joy; in the *Herakles*, as in the *Erechtheus*, it accompanies songs of victory; in the *Troades* it is associated with joyful singing, and in *Iphigenia Aulidensis* it accompanies the songs and dances at a wedding. These passages might tempt us to suppose that it is particularly suited to scenes of happy celebration; but this is at odds with the reference in the *Helen*, where the sorrowful Helen calls on the Sirens to bring the Libyan *lōtos* to accompany her lamentation. At *Bacchae* 160 it is involved in the rituals of Dionysus, as the *aulos* is often elsewhere, and at *Bacchae* 687 the misguided and straight-laced Pentheus links it with wild behaviour, drinking and unbridled sexuality. There is nothing unusual about any of this. All the situations evoked are ones where the instrument we would expect is the familiar Greek *aulos*, which appears in these contexts in all relevant non-Euripidean writings of the period, and indeed in other passages of Euripides himself.

Another hypothesis might be that Euripides was prompted to use the name by the geographical locations of the scenes in which the instrument is mentioned. But this suggestion also fails. The *Erechtheus* is set in Athens, as we have seen; and with one exception, the *Helen*, which is set in Egypt, none of the regions in which the action of the relevant plays takes place is anywhere near Libya. One of them, the *Troades*, is in fact set at Troy, that is, in Phrygia, the country with which the *aulos* was most strongly and consistently associated, and the relevant verses in that play are doubly peculiar, since they couple the Libyan allusion with an explicit reference to Phrygia. Describing what happened when the wooden horse was dragged into the city, the Chorus sings that "the Libyan *lōtos* and Phrygian songs rang out, and maidens sang with a joyful cry to the beat of their high-stepping feet" (*Tr.* 544-6). The impression we get is of stereotypical Phrygian music with vigorous singing and dancing to the sound of the *aulos*; but in that case, why is their instrument called 'Libyan'? It seems not just odd but positively perverse.

The strangeness of Euripides' expressions, if indeed they are simply intended to designate the ordinary *aulos* by a different name, stems of course from the fact I have just mentioned, that according to a multitude of sources, the *aulos* is a Phrygian instrument; it was invented in Phrygia and came from there to Greece, and as Aristotle says (*Pol.* 1342a32-b6), it has especially close affinities with Phrygian music. In the legends we have the story of Athena, who devised the *aulos* and then threw it away in disgust, and the Phrygian satyr Marsyas who found the instrument that Athena had rejected and taught himself to play it—leading on, of course, to the tale of the contest between Marsyas with his pipes and Apollo with his lyre, in which Apollo, inevitably, was victorious (according to some accounts because he cheated). All these legends are consistently set in Phrygia; and in reports that have some claim to be treated as

historical, or at least as attempts at history, the instrument and its music were brought to Greece by the Phrygian aulete Olympus, whom the mythographers represent as the pupil of Marsyas himself.[4] Allusions to the *aulos* as 'Phrygian' appear in innumerable sources, and its associations with Phrygian music are repeatedly emphasised. I won't bore you by citing relevant texts; all that is very familiar territory.

There are a few writers, however, who flatly contradict the usual accounts, and assert that the *aulos* was actually *invented* by the Libyans. The earliest clear example of this assertion is in a snippet quoted by Athenaeus from the work *On Agathocles* by Duris of Samos, a historian whose life spanned the late fourth century and the early third. It might also be regarded as the most authoritative example, since it comes from a historian rather than a poet, who is trying— or so we might suppose—to tell us something that is actually true. Modern scholars, however, tend to treat Duris with suspicion, usually on the grounds that he is less concerned to record facts than to purvey Samian propaganda. In this case—at least as far as I can see—Samos and Samian chauvinism are not involved, but there may well be other reasons for doubting that what he says is true; on the other hand truth, as we shall see, is not really the issue. The question is rather whether what he says is pure invention, or whether he is drawing on a tradition that already existed.

What he is doing, at any rate, is offering an explanation for the usage that we find in Euripides. Taken at face value, what Duris says implies that it was characteristic of other poets too; I'm not convinced that we should take the implication seriously but in the absence of further evidence that's an issue which we'd better leave on one side. At any rate, this is what he says. "The poets call the *aulos* 'Libyan' because Seirites, who was apparently the first inventor of *aulos*-music, was a Libyan, one of the Nomades; and he was also the first to play the *Mētrōia* on the *aulos*" (Duris fr. 34 Müller, quoted at Athenaeus 14.618b-c). Now there may be some confusion here, since 'Seirites' appears in no other text as the name of a Libyan musician or of anyone else. In other sources it is not the name of an individual person but that of a Semitic people; and they lived in the Sinai peninsular, not in Libya. They are indeed mentioned in the Old Testament, and were known, among other things, for having devised the first alphabetic script. But the name is unimportant. What seems extraordinary about Duris' account is that it plainly contradicts a well entrenched tradition about the origins of the *aulos*, that is, the tradition which places its invention in Phrygia.

If Duris is challenging a firmly established belief, we should try to work out what grounds he could have had for asserting his unorthodox view. It's worth

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4   E.g. [Plut.] *Mus.* 5, 1132f.

noticing that his account goes beyond the mere statement that the *aulos* was a Libyan invention; he not only names the supposed inventor of the *aulos* and specifies the tribe to which he belonged, but also asserts that he was the first performer of the musical pieces called *Mētrōia*. But the word means 'pieces of music for the Mother Goddess', and in the usual tradition these too are emphatically Phrygian, dedicated to the Mountain Mother, the Phrygian goddess Cybele. According to reports in the Ps.-Plutarchan *De musica*—reports which may have come from Aristoxenus—they were among the compositions of Olympus, the archetypal Phrygian musician (1137d, cf. 1141b). It looks as if Duris is implicitly claiming for his Libyan *prōtos heuretēs* everything that the regular historians had credited to Olympus.

Before tackling the problem directly, I need to make a point about the Olympus tradition itself. Sometimes, as I've said, he is intimately linked with figures of legend, that is, with Marsyas and Athena, and sometimes he is located historically, as for instance in the Ps.-Plutarchan *De musica*, on the authority of Aristoxenus.[5] Now we know that the Greeks often made no sharp distinction between history and myth; but it's also true that some writers of the fifth and later centuries seem to have deliberately reinterpreted or reinvented mythological characters and stories, and introduced them into supposedly historical narratives. This is what happened, I think, in the case of Olympus. In the earlier accounts he was associated with Marsyas; but when educated Greeks began to distinguish history from legend, some of them—impressed, perhaps, by the fact that music attributed to Olympus was still well known in their own time—looked for ways of extracting him from the mythological context. This may be the origin of the suggestion that there were two musicians of that name, a more ancient Olympus who belongs to the legends, and a younger Olympus who could be treated as the composer of the familiar melodies. The first person we know of who propounded this idea is Pratinas in the fifth century, who asserted, we are told, that the younger Olympus was responsible for composing a piece for the *auloi* called the *Polykephalos nomos* (*PMG* 713(i) *ap.* [Plut.] *Mus.* 1133d-3). In Plato's *Symposium* (215b-c) Alcibiades in effect insists on returning to the mythological version, asserting that Olympus was taught the art of *aulos*-playing by Marsyas, and that the tunes credited to Olympus were really those of his teacher. In a little while I'll give an example of an attempt on a much larger scale to historicise tales that had started out as myth.

I suspect, then, that when Duris produced his purportedly historical account of the Libyan origins of the *aulos*, he was going to work in much the same way as Pratinas. That is, if he had any grounds at all for his contentions, they came

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5   In addition to the references given above, most notably in 1134f-1135b.

from a pre-existing tradition parallel to the familiar one, a tradition that belonged to the world of the myths, and which, when reinterpreted as history, would challenge the primacy of Phrygia in the development of *aulos*-music and transfer this status to Libya. But when put baldly like that, this suggestion of a pre-existing myth is the merest hypothesis. The important question will be whether we can confirm it, or at least give it some solid support, by finding traces of such a myth in the surviving literature.

At first sight the prospect of finding such a myth seems unpromising, since as I said at the beginning, Euripides is the first writer to use the word 'Libyan' in connection with the *aulos*. That remains true; but I want to suggest that there are quite persuasive reasons for thinking that the tradition on which he is drawing does indeed go back to a substantially earlier date. The immediate evidence is in Pindar's 12th *Pythian Ode*, first performed in either 490 or 486 BC (about fifty years before Euripides' *Alcestis*), which celebrates among other things the invention of the *aulos*. As in most other versions of the story, it was invented by Athena; but this is not the familiar tale of Athena and the satyr Marsyas. *Pythian* 12 describes Athena as having invented the art in which Midas of Acragas has been victorious in the contest at Delphi, that is, the art of playing the *aulos*; and it tells us, specifically, that she devised a melody for *auloi* called the 'Nomos of Many Heads'—that is, the same *Polykephalos nomos* which Pratinas assigned to Olympus the younger. The melody, Pindar explains, was designed by Athena to celebrate Perseus' killing of the Gorgon Medusa, in which she had assisted him; and it did so by imitating, on the instruments, the dreadful wailing with which Medusa's sisters had greeted her death. Now Pindar, like perhaps the majority of other Greek writers who mention the Gorgons, fails to tell us where they lived and where Medusa was killed; but in a fair number of texts the place is indeed identified. In some versions it is somewhere in the north-east, in the region of the Black Sea; in *PV* 790ff., for instance, the Gorgons live far away towards the sunrise, not far from the land of the gryphons and the Arimaspians. That would not be too obtrusively inconsistent with the Phrygian stories about the origins of the *aulos*. But this was not the commonest view of the matter; in fact it's rather rare. What seems to be the dominant tradition can be traced back to one of cyclic epics, the *Cypria*, and to Hesiod. The *Cypria* places the Gorgons on an island in Okeanos, that is, in the Atlantic Ocean, presumably off the coast of North-west Africa (*Cypria* fr. 32 Bern.), and Hesiod says something very similar; at *Th.* 274f. he tells us that they live "beyond Okeanos, in the farthest region towards Night". In Herodotus we hear that according to the people of Chemmis in Egypt, Perseus was born in their city, and that after growing up in Greece he came back to Egypt "for the reason which the Greeks give, that is, to bring back from Libya

the head of the Gorgon" (2.91). The Libyan location of the story reappears in
a fragment of Aeschylus' *Phorcides* (41A 457a Mette), in Aristophanes' *Frogs*
(477), and again in the author who prompted all these questions, that is, in
Euripides, who refers to the "race of Libyan Gorgons" at *Ba.* 990; and most later
writers adopt the same view. It turns up, in particular, in a passage of Diodorus
of Sicily (3.55), in the course of a discussion of Libya which I'll come to in a
moment.

If we put all this evidence together, we may think it a reasonable guess that
when Euripides and Duris refer to the Libyan *aulos* they are drawing on the
same tradition as Pindar. In its mythical form it links the invention of the *aulos*
with Athena and with Perseus' slaying of Medusa, which it locates in Libya. The
version transmitted by Duris must then be an attempt to translate the myth
into historical terms, in which the inventor is an ordinary human being, in just
the same way that the Phrygian tradition about the origins of the instrument
includes both the myth of Athena and Marsyas, and what was taken to be a
piece of sober history, in which the founding father of *aulos* music is a real
human being called Olympus. Duris' contention that the *Mētrōia* originated in
Libya, with its obvious implication that it did not originate in Phrygia, will also
fall into place when we turn to the long passage of Diodorus of Sicily which
I mentioned just now, since it stands in a tradition which treats a very sub-
stantial block of legendary material that was normally located in Anatolia as
belonging in its entirety to Libya.

If the rival tradition linking the *aulos* with the tale of the Gorgons, and
hence with Libya, was already familiar in 490 or 486 BC, when Pindar com-
posed *Pythian* 12, there will be no need—or at least a less pressing need—to
find a special explanation for the appearance of allusions to the Libyan *aulos*
or *lōtos* in Euripides, half a century later, or for his apparent assumption that
his audience will immediately understand why he gives the instrument that
name. We may wonder why the tradition—in so far as it related to the *aulos*—
has left no clearer traces in earlier literature, but of course we must remember
that only a tiny proportion of that literature survives. Perhaps Pindar's account
of the instrument's invention was already there in the *Cypria*, which contained
tales about things supposed to have happened before the Trojan War. That's a
perfectly possible hypothesis, but it is also a purely speculative hypothesis; I
have no evidence whatever to support it.

But it's worth looking briefly at the block of material together with which
the tradition about the Libyan origin of the *aulos* may have marched, though
I shall not discuss the passage of Diodorus Siculus in detail. It occupies a long
stretch of Book III, running with a few interruptions from chapter 52 to the
end of the book in chapter 74. He tells us that its contents are based on a work

by an Alexandrian writer called Dionysius, mysteriously nicknamed Dionysius 'Skytobrachion', "Leather-arm". The project of this Dionysius was to reinterpret ancient myths connected with Libya in historical terms, and the construction he gives them is plainly the product of his own rather wild imagination; it has no real value as history. Nowadays students of ancient history usually dismiss his accounts as worthless, and so from a historical perspective they are; Diodorus expresses doubts about them himself. But this shouldn't induce us to ignore the fact that Dionysius Skytobrachion would have had nothing to reinterpret if the stories he transformed had not been present in much earlier traditions, in the guise of myth. Some his works were written no later than the middle of the third century BC, as has been established on the basis of a papyrus fragment discovered not long ago (*PHib.* 2.186); and if we assume that he was an adult when he wrote the work from which the papyrus fragment comes, his lifetime must therefore have overlapped with that of Duris, who died in about 260 BC. We thus have two writers of about the same period who were engaged in pretty much the same sort of project.

They were also pursuing very similar agendas, though Dionysius does it on a much grander scale, since both of them were working on legends which locate in Libya events that are usually placed in the north-east, and specifically in Phrygia. The ones with which Dionysius dealt include, for instance, the story of the Argonauts and the tales told about the Amazons; and more relevantly for our purposes, they include also the legends to do with the god Dionysus, and with the goddess known as the Great Mother—that is, in Phrygian terms, Cybele—in whose honour the *Mētrōia* attributed to Olympus (if we follow the Phrygian tradition) or to Seirites (if we follow the Libyan one) were composed and performed. All these myths are normally located in Phrygia, and all of them are now transported to North Africa. Dionysius says he is recounting them in the form in which they are told by the Atlanteans, inhabitants of the lands in the far west of Libya, close to the place in which he also locates the Gorgons.

I am not going to try to summarise his historically rationalised versions of the narratives, though they make mesmerizing reading. It's perhaps worth mentioning that the musical instruments associated with the Libyan version of the 'Great Mother', a title given according to Dionysius to a daughter of the king of the Atlanteans, are just the same as those most prominent in the rituals of Phrygian Cybele. They are the *kymbala* and *tympana*, and they enter the story in much the same way in both geographical variants. Diodorus goes on immediately to remind us that there is a Phrygian version of the myth, and in chapters 58f. he presents it in a remarkable version which integrates the legend of Cybele with the tale of Marsyas, Athena, the invention of the *aulos* and the contest between Marsyas and Apollo. It's an ingenious and intriguing

conflation of myths which I commend to your attention, but I'll say no more about it now.

The main point I've been trying to make is that the stories told by Dionysius Skytobrachion are reinterpretations of pre-existing myths, and that they illustrate very vividly the way in which Greek legends, including accounts of the origins of certain kinds of music, are not always consistently located in the same parts of the world. This capacity of the myths for geographical migration provides a useful frame for the conclusions about Euripides' Libyan *lōtos* for which I have been arguing. If I am right, we should resist the temptation to suppose that the Greeks invariably traced the history of the *aulos*, the music of the Cybele cult and the musical rituals of Dionysus to the Anatolian region. That seems to have been the dominant belief, but the rival mythology which located them in the far west of Libya should not be ignored. Most of our direct sources in which myths are transplanted to different parts of the world are relatively late, and these versions of the tales may sometimes be due to nothing but the unrestrained imagination of Hellenistic fantasists. But that is not the situation with Dionysius Skytobrachion, who was not in fact retailing myths at all, but was recasting in historical terms a set of legends that already existed and perhaps had existed for centuries. So far as the origins of the *aulos* are concerned, we have found quite a respectable bundle of evidence suggesting that the Libyan tradition was no less ancient than the Phrygian one.

But even if the hypothesis I've offered is acceptable—and I wouldn't be surprised if you have some doubts about that—some features of the case we might call 'The Mystery of the Libyan *aulos*' remain puzzling. In particular, if the tradition from which it emerged was well known in the Greek world from the time of Pindar's early compositions right down to the death of Euripides—that is, in effect, throughout the fifth century and presumably for a fair stretch of time before and after that—why do we find no trace of it in other fifth-century literature, and what possessed Euripides not merely to use these locutions when no one else does, but to use them as his commonest way of designating the instrument in question, almost, it would appear, as a matter of routine? Did he have special personal, artistic or ideological reasons for buying into the Libyan tradition at the expense of the Phrygian?[6] We might also ask, similarly, why after some 275 years following the death of Euripides in which this tradition disappears almost completely from view, the expressions suddenly reappear not once but twice in a very public and prominent setting, that is, in both the paeans which two prominent Athenian composers of the

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6 By contrast with his thirteen allusions to the 'Libyan' instrument, he refers to *auloi* as 'Phrygian' only twice, at *Ba.* 128 and *IA* 577.

late second century, Athenaios and Limenios, composed for performance at Delphi. These, it seems to me, are questions we can't avoid asking; I on the other hand shall avoid making any attempt to answer them, since I have no idea what the answers could be.

Bibliography

Pöhlmann, E. and West, M.L. (eds). *Documents of Ancient Greek Music*. Oxford: Oxford University Press.

West, M.L. (2014). *The Making of the Odyssey*. Oxford: Oxford University Press.

West, M.L. (2016). Odysseus re-routed. *Eikasmós* 27, pp. 11-23.

Echo's Bones and the Metamorphoses of the Voice

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Abstract

This article concentrates on the description of the demise of Echo in the Ovidian narrative of Echo and Narcissus in *Metamorphoses* 3. I argue that a pun in the line *vox tantum atque ossa supersunt* (3.398) encapsulates the problem at the heart of the myth: rather than being a reflection on the origins of the echo and the delusion of the senses, the myth of Echo is a meditation on the nature of the voice.

Keywords

In 1933, Samuel Beckett wrote a 28-page short story entitled *Echo's Bones*—a reference to the episode in Ovid's *Metamorphoses* (3.339-510) that narrates the demise of the nymph Echo after she was spurned by Narcissus. The story was not published during Beckett's lifetime, editors finding it too nightmarish.[1] There is indeed something haunting in the end of the Ovidian passage, and especially in the line that inspired Beckett's title, "only her voice and her bones remain" (*vox tantum atque ossa supersunt, Met.* 3.398). Yet apart from Beckett, critics have in general neglected the final part of the story, concentrating instead on the more empowering first part of the narrative. It is time to unearth Echo's bones and to reconsider their significance for this well-known story.

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1   The story has now been edited, with a commentary, by Mark Nixon (Beckett 2014).

1   Echo's Curse in Scholarship

There is no need to remind the reader that, in Ovid's version of the narrative, Echo used to be a chatty nymph, whom Juno first deprived of her ability to initiate sentences.[2] Echo fell in love with the young Narcissus; as he got lost in the forest one day, she was provided with the opportunity she needed. Hiding from the youth, Echo was able to use her speech impediment to her benefit: by appropriating the end of his phrases, she could express her own feelings. Repeated in her mouth, his anxious question, *ecquid adest* ("is anybody here?") could turn into an enthusiastic assertion: *adest* ("she is here!"); his impatient request to have his invisible interlocutor show himself, *huc coeamus*! ("let us come together!") could become an eager invitation to copulate in a free translation: "let us come, together!" (*coeamus*).

   This first part of the narrative has given rise to many readings of the figure of Echo, as many as there are ripples in a pond after a pebble is thrown in. The nymph has been interpreted as a figure for female empowerment (Rosati 1976; Berger 1996), for the subaltern speaking (Spivak 1993; Raval 2003), for poetic memory (Hollander 1981; Bonadeo 2004), for the narrator or the poet (Barchiesi and Rosati 2007), for intertextuality (Hinds 1997), for the *alter ego* and the "nostalgia of the self" (Gély-Ghedira 2000).

   But if Echo has become a voice for other people, she has, in scholarship just as in the myth, lost hers. The 'voice' that appears in several titles and analyses is always a trope.[3] It stands in for the presence of the narrator, for the triumph of literary self-consciousness, or for the expression of the Augustan poet's virtuosity, the artist thumbing his nose, like the nymph herself, at any form of control exercised by his prince. The power of Echo's tongue might be curtailed (as Juno explains), but in all these readings, language triumphs and the voice disappears. What has been lost is an interest for the acoustic qualities of Echo.

   Yet, there is much more to say about Echo. In the next few pages, I want to argue that one word at the end of the episode complicates the reading of the first part: the narrative of Echo's decay suggests that the episode is not about what Echo says, why Echo speaks, or whom she speaks for. It is not about Echo's language but about Echo *as* voice. My contribution resides at the

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2   There is a different version of the myth preserved, in its longest surviving version, by Longus in *Daphnis and Chloe* (3.21-3), in which Echo is Pan's lover, and she dies dismembered rather than shriveled. For a presentation of the difference between the two ancient versions, the problems they both raise, and their tradition in modernity, see Gély-Ghedira 2000. On the figure of Echo in general, Bonadeo 2003.

3   Cf. Nowell Smith 2015 on the use of 'voice' as figure in scholarship.

intersection of literary criticism and recent studies on the voice: I want to show that the end of the Ovidian narrative reflects in its very texture on the haunting question of the ontological status of the voice, in ways reminiscent of, or even announcing, modern inquiries into the topic.

2   Echo's Decay

The end of the narrative of the *Metamorphoses* describes how the nymph, spurned, now hides, alone, ashamed, in the deserted woods and gets transformed into an echo:

> spreta latet silvis pudibundaque frondibus ora
> protegit et solis ex illo vivit in antris;
> sed tamen haeret amor crescitque dolore repulsae: 395
> et tenuant vigiles corpus miserabile curae,
> adducitque cutem macies, et in aëra sucus
> corporis omnis abit; vox tantum atque ossa supersunt:
> vox manet; ossa ferunt lapidis traxisse figuram.
> inde latet silvis nulloque in monte videtur,   400
> omnibus auditur: sonus est, qui vivit in illa.

> Thus rejected she hides in the woods, and she hides her shameful face with boughs, and from then on, she lives in lonely caverns; but her love holds fast and grows with the grief of rejection. Wakeful sorrows waste her miserable body away, leanness shrivels up her skin, and all the sap of her body dissolves in thin air. Only her voice and her bones survive: her voice remains, but the bones, they say, are turned into a figure of stone. There, she hides in the woods, and nobody ever sees her roaming the hills, but everybody hears her: she is sound, a sound lives in her.

This part is often read as an afterthought, the aetiological explanation for what an echo is—a sound with no body, an aural specter, a mere reflection. The narrative performs the same function as the conclusion of many stories in the *Metamorphoses* that explain how creatures achieved their current bodies after having changed shape (*mutatas formas ... in noua corpora*, *Met.* 1.1f.). But it is also different from these, as the narrative of Echo's metamorphosis is that of an effacement rather than that of a transformation, a lack of body rather than a new body. One cannot help but notice that the narrative stretches over nine lines the moment of metamorphosis, nearly as many as the exchange

between Narcissus and Echo. Even though there is no new "shape" (*forma*) to comment on, the transformation is very detailed: the body gets emaciated, the skin shrivels, the sap of her body vanishes in the air. The narrative actually presents a double conclusion: what survives of the deceased Echo are her voice and her bones (*vox tantum atque ossa supersunt, Met.* 3.398).[4] What does it mean exactly? The bones in particular stick out awkwardly from the neat evanescence of the echo and become, "they say" (*ferunt*, 399), a figure or effigy of stone (*lapidis figuram*, 399). If we read the myth as a tale about accounting for acoustic illusion, why bother with Echo's rocky remains? This makes for a strange ending for a talkative nymph: silence and cold rigidity take the place of what was warm flesh, burning passion and ensnaring sound.

There is, of course, a simple explanation. These bones are the pile of stones that constitute the rocky background needed for the sound to rebound and create an echo. With only open air, there is no echo.[5] The "bones" (the rocks) are actually the condition for the reflecting voice to exist at all. This explanation provides a neat element in the sustained parallel between visual and acoustic phenomena in the sequence of the stories of Echo and Narcissus. The rocks here function like the surface of the water that mirrors sights and continue the parallel between visual and vocal illusion. The Echo narrative thus announces that of Narcissus and contains it in miniature: the episode builds on two Latin ways of transforming life into an image, or *imago*, of it: on the one hand, an acoustic one (the echo) full of life, and on the other, a visual one (the stones), a marker of death.[6] But this is not quite satisfying enough. What to do, in particular, with the reference to the "stony shape" (*lapidis … figuram*), and with the implied body in which the sound lives (*in illa*)? What *are* Echo's bones? I suggest another solution, which simultaneously picks up on issues that are important in Ovidian poetics and sees the myth as a profound reflection, on its own, about the nature of sound and the voice. It does not supplant the interpretation of the *ossa* of Echo as physical explanation of how an echo

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4   Anderson's commentary glosses the transformation, somewhat unhelpfully, as "[voice and bones] separate from each other, bones turning into stone (a reversal of the change of 1.398 ff.) and voice alone surviving to represent Echo's troubled personality" (Anderson 1997, *ad loc.*).

5   Barchiesi and Rosati 2007, *ad loc.* make the point. Ancient scientists theorized about the phenomenon of the echo and the causes of its formation: cf. Democr. 68A135 DK; Arist. *de An.* 419b25-31; [Arist]. *Pr.* 901b16-23; Lucr. *Rer. nat.* 4.545-53, 571-80, 606-18. For more references to ancient theories of the echo, see Bonadeo 2003, 11-40; Lachenaud 2013, 128-32.

6   On Ovid's poetics of illusion, see the masterful reading in Hardie 2002.

works, but rather doubles the point by enacting the metamorphosis of the nymph through language.

3   *Ossa, ossa, os ...*

Simply put, when the text is sounded out loud, the *ossa* of Echo are the homophonous Greek ὄσσα, one of the words for the voice in Greek. When we thought Echo's body had become a silent heap of stones, we find it resounding again. This bilingual pun is not just in the ear of the critic, but at the heart of the *Metamorphoses*—a poem, in Barchiesi's words, "obsessed with ... doubling":[7] from the initial *formas* of the prologue (*Met.* 1.1) that recasts the Greek μορφή, Ovid uses the verbal material to convey the sense of an ever-changing world embedded and reified in language, *à cheval* between two worlds, the Greek and the Roman one. The materiality of language and its enactment in the mouth of the speaker are the means by which Ovid doubles (echoes?) the point of the narrative. Through the bilingual homophony, the poet builds on the Greek past of Echo and on other versions of the myth where she is not Narcissus' but Pan's lover.[8] Just like the nymph with Narcissus, the narrator plays hide-and-seek with the reader and by alluding to her Greek origins, highlights the originality of her new, Latin, embodiment.

   This bilingual pun actually participates in a larger linguistic and poetic strategy in the *Metamorphoses*. The verbal material is, for the poet, a way of communicating his cosmic vision to readers. As Garth Tissol puts it particularly clearly: "Ovid through etymological wordplay engages his readers in an active appreciation of transformation and flux, inviting them to participate in his vision of natural and cosmic origins".[9] More precisely, about bilingual puns, he states: "Ovid engages the reader's mind to participate in transformative

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7 On the poem's obsession with "simulation, doubling, and spuriousness," see Barchiesi 2006, 407.
8 For Echo as Pan's lover: *h. Hom. Pan.* 21; Mosch. 6; Long. Soph. 3.21-3; Luc. *DDeor.* 2.4; Apul. *Met.* 5.25; *Orph. H. Pan.* 16; Philostr. *Im.* 2.11; Nonn. *D.* 16.289, 39.130. Ovid is the one who coupled the narrative of Echo with that of Narcissus; on the likely possibility that Ovid invented this version of the myth, cf. Hardie 2002, 152.
9 Tissol 1997, 172 (173 for the next quotation). Tissol examines a few instances of bilingual puns in the *Metamorphoses* (172-6); see also Mitsis and Ziogas 2016, 1-3. For other studies examining the importance of puns and etymology in the *Metamorphoses*, see Rosati 1983, 161-6; Ahl 1985 (for whom the "basic unit of sense, for purposes of play, is the syllable rather than the word", 55); Hinds 1987; Myers 1994; Michalopoulos 2001 (who lists, as one feature of Ovid's etymologizing, "etymological metamorphoses and continuities", 9).

acts: the mental process of translation is an experiential symbol of the meta-morphosis that is occurring in each case". Tissol refers mostly to puns based on proper names and etymology (Ocyroe, 'swift-flowing', in *Met.* 2.637f.; Battus, the 'informer', in *Met.* 2.706; Aeropus, the name of a bird Eumelus's son was transformed into; etc.).[10] One could think that Tissol is imagining a particularly collaborative ancient reader, one modeled on the modern critic, particularly eager to display his or her own wit and knowledge of the ancient corpus, and find it reflected in the text of Ovid. But the frequency of these puns, bilingual wordplays, and intertextual word games is such not only in Ovid but also in his contemporaries' poetic texts that one can only assume that they were meant to appeal to an educated readership, eager to decode such games.[11]

With this context in mind, let us return to the pun *ossa* / ὄσσα in the Ovidian text. I am arguing that the bilingual homophony is important for Ovid's con-ception not only of the origins of the echo and his investigation of its causes, but it also gives readers (both ancient and modern) access to a deeper quan-dary about Echo and her metamorphosis. More precisely, what the pun *ossa* / ὄσσα articulates is the mystery of the voice. As recent studies on the topic have suggested, the voice is this mysterious object residing at the crossroad between materiality and immateriality, interiority and exteriority, sense and the senses, individual and society, identity and difference, objectivity and subjectivity, presence and absence.[12] As the text's *ossa* ("bones") pass the *os* ("mouth") of the reader to sound like ὄσσα ("voice"), they represent the very paradox of the

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10   See Kenney 1998.

11   On the Romans' fondness for, and familiarity with, wordplays involving etymologies or other forms of learnedness, see O'Hara 1996, 4-7, 51-6, and especially 102-7.

12   Drawing from Continental philosophy, cultural and media studies, and participating in the material turn transforming the Humanities, recent scholarship has emphasized fas-cinating and often paradoxical features of the voice. Three studies are now fundamental. In her masterful *For More Than One Voice*, Adriana Cavarero draws from the philosophy of Emmanuel Levinas and emphasizes the idea of a "vocal ontology of uniqueness": going against the metaphysical tradition that silences the "I" in flesh and blood, Cavarero strives to retrieve the subject from the voice. Turning to Echo, she comments: "through the fate of Echo, logos is stripped of language as a system of signification and is reduced to a pure vocalic. And yet this is not any vocalic, but rather a vocalic that erases the semantic through repetition" (Cavarero 2005, 168). In a different vein, Mladen Dolar's *A Voice and Nothing More* (Dolar 2006) considers the voice, on a Lacanian backdrop, as an object of desire. In Shane Butler's *Ancient Phonograph*, Echo is a marker of the materiality of texts, the murmur of the voice than can be captured by literature working, literally, as an an-cient "phonograph" (writing of the voice). For him, "Echo vanishes ... only if we perversely insist on *looking* for her; listen, and she is instead everywhere" (Butler 2015, 83).

voice itself: the homophony makes the material become immaterial, the visual aural, and presence absence.[13] On my reading, the end of the Echo narrative does not so much contemplate ideas about the delusion of the senses, but about the paradox of the voice itself, a sonorous presence that emanates from a body, transcends it, yet always means it. If the bones (*ossa*) of Echo are also her voice (ὄσσα), her voice is her very bones.

Moreover, as Steven Connor has underlined in his cultural study of ventriloquism, a voice actually encapsulates all the ambiguities of identity: "my voice defines me because it draws me into coincidence with myself, accomplishes me in a way which goes beyond mere belonging, association, or instrumental use. And yet my voice is also most essentially itself and my own in the ways in which it parts or passes from me".[14] Echo's transformation actually shows this double status of the voice in relationship to the body: while Echo *has* a voice and a body at the beginning of the narrative, she *becomes* a voice, without a body, at the end of the myth. At the same time, when only Echo's *vox* remains (*vox manet, Met.* 3.398), it both marks her as echo, since an echo is a voice that does not go away after it is sent forth, but it also marks the loss of that identity as talkative nymph.

The homophony *ossa*/ ὄσσα thus stands in for something crucial about Echo as voice, but there is more. The word ὄσσα that one hears when the bones of Echo are sounded out in the Latin text refers to a specific type of voice: ὄσσα, in Greek, is used of the quasi-magical voice of some special creatures.[15] It is the voice, but in its uncanny dimension, the voice of monsters and other fantastic beings.[16] Ὄσσα in the Greek imagination puts in contact the supernatural and the everyday—the reality of a voice and a certain awesome quality that is activated every time this type of voice is heard. It can refer to the voice of the Muse, as it hints at the mortality of the poet for example;[17] or that of a god, in his awe-inspiring epiphany;[18] or it describes the sounds of a musical instrument, as it fascinates listeners and invites them to marvel.[19] More specifically, the uncanniness at the heart of the Echo narrative is that of a voice that is

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13   For another play with *os* / *ossa*, see *Met.* 5.58; Michalopoulos 2001, 136f.

14   Connor 2000, 7.

15   Ford (1992, 176) defines ὄσσα as "a superhuman or unearthly sound that may be marvelous or beautiful in the songs of the gods but is terrible or uncontrollable on earth".

16   When we thought Echo had ossified, we find her revived in the alliterative murmur of *ossa supersunt* (398). On alliteration and the myth of Echo, see Butler 2015, 59-87.

17   In Hesiod, the voice of the Muses is always referred to as ὄσσα (*Th.* 10, 43, 65, 67). On the voice of the Muses, see Pucci 1997, 31-48.

18   Pind. *Ol.* 6.62.

19   *h. Hom. Merc.* 443. The ὄσσα of the newly-invented lyre is qualified by θαυμασίη—fascinating.

not attached to a mouth or a body—an acousmatic voice.[20] This fundamental truth about Echo's voice, or Echo as voice, was set out in the nymph's response to Narcissus at the beginning of the narrative: when she still had a body but was hiding in the woods, she responded to Narcissus' question, *ecquid adest* ("is anybody here?") with *adest*—"she is here!". But the lack of personal pronoun in Latin also makes it possible to interpret the answer as "it (a voice, not a person) is here!". While Narcissus assumed that a voice announced a body, Echo's answer shows that a voice is not subsumed by a body—a voice can be in and of itself: *adest*. The following lines of the text, *vocat illa vocantem* ("she calls the one who calls") make this point come through particularly clearly: the feminine pronoun (referring to the nymph, or to her *vox*), hugged between two verb forms of voicing, emphatically establishes the identity and resounding presence of the nymph. If *ossa* is understood as ὄσσα, one can then better make sense of the conundrum of the last line of the passage (*sonus est, qui vivit in illa, Met.* 3.401). For if Echo does not have a body anymore, what does the *in* refer to? I suggest that if one hears the *ossa* as ὄσσα, the *in illa* refers to Echo but Echo as the type of monstrous or divine creature that is, in Greek, qualified by a certain kind of voice (an ὄσσα). Rather than pointing to some remnant of her old embodied existence as nymph, the *in illa* refers to her new ontological status, as numinous, monstrous, awesome creature.[21]

Finally, there is a further interpretation that adds a layer of significance to the text and to my suggestion. In the lines *vox tantum atque ossa supersunt: / vox manet; ossa ferunt lapidis traxisse figuram*, the pun also highlights the awesome embrace between the visual and the aural. If we push the reading of *ossa* as ὄσσα, the bones of the echo, the dead, monumental, presence of the now silent nymph can be understood as writing.[22] *Traxisse figuram* is a punning reference to the written word, that 'hands over, transmits, entrusts' (*traho*, from which we get 'tradition', Lewis and Short's Dictionary) the 'shape' (*figura*) of

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20 The adjective acousmatic, first used by the composer Pierre Schaeffer and theorized by Michel Chion, is derived from the Greek *akousmatikoi*, the name used to describe the disciples of Pythagoras who could only listen to the master behind a veil. On the "sound unseen" of the acousmatic voice, Kane 2014 is now fundamental.

21 That is precisely the kind of haunting divine presence (*monstra ac portenta*, 590) that Lucretius rejects in his own account of the nature of the echo in the *De rerum natura* (580-94), and whose vision Ovid's *Metamorphoses* is in dialogue with; on Lucretius and the echo, see Koenen 2004.

22 While this last suggestion is of particular relevance for modern readers with an interest in questions of literacy and orality in the ancient world, it is not without bearing for Augustan poets and their readers. They themselves were particularly attuned to issues related to the two opposing models of composition, as Lowrie (2009) makes clear.

language and 'figures' of speech. The rocky bones are only the visual marker of something that once sounded. Just like Ovid's text itself, with its signs and its *figurae*, the calcified remains of Echo are the visual medium that transmits her uncanny voice, a voice that sounds beyond death. This reference to a voice and stony presence can hint at epigrams and epitaphs.[23] Again, just like Ovid's text itself, the stone needs to be read and asks the viewer to imagine a voice, a delayed voice coming from the dead. Ultimately, as with the echo, the stones inscribing Echo's life confront the listener with his or her own aural imagination. In both cases, there is alterity in the experience of listening, in the experience of the delayed voice: reading is a form of ventriloquism, of a voice inhabiting another's body.[24] The stone contains, and is the condition for, the voice, just as the *ossa* suggests first the nymph's face (*os*), the mouth (*os*) that spoke too much, and ultimately, the mouth (*os*) of the one through which Echo as voice lives.[25] This is the last metamorphosis of Echo. As her *ossa* ("bones") turn into an ὄσσα ("voice"), she dissolves again and becomes a presence ventriloquized through our own reading.

Conclusion

By way of conclusion, it is worth returning to Beckett's short story *Echo's Bones* with which I started. Beckett's narrative stages bizarre characters that have much in common with the mythical Echo: the main protagonist, Belacqua, is a revenant whose body casts no shadow, and the female character Zabarovna is described, on the model of Echo, as "frankly alluring him to come and doubt not, stretching forth to hug him her holy hands pollutant with a million good examples".[26] Just as with the Ovidian text, Beckett's narrative is full of intertextual references, puns, and linguistic games. And just as with Echo and Narcissus, the dialogue between the pair is a reflection on self-knowledge, love, and death. But one passage is particularly relevant:

> – 'Do you know' said Belacqua 'I like the way you speak very much.'
> – 'The way I speak' [Zabarovna] said.

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23   Barchiesi and Rosati 2007. Gützwiller 2002.
24   On ventriloquism, see Connor 2000.
25   On the mouth, see LaBelle 2014.
26   Beckett 2014, 5 (and 6 for next quotation).

> – 'I find your voice' he said 'something more than a roaring-meg against
>   melancholy, I find it a covered wagon to me that am weary on the
>   way, I do indeed.'
> – 'So musical' she said, 'I would never have thought it.'

Never is the parallel between Zabarovna and Echo as clear as in her first re-
sponse, where she repeats a part of Belacqua's sentence and turns meaning
into vocalic production. As a matter of fact, Belacqua's fascinating comment
about Zabarovna's voice can throw light on the myth and the Ovidian line that
gave its title to the short story. In describing the girl's voice, Belacqua's col-
lapses any distinction there might be between voice and identity: Zabarovna-
Echo *is* her voice. In a similar manner, I have argued that the end of the Echo
narrative is a profound reflection on the nature of the voice. More specifically, I
have shown that the Ovidian text hosts a pun that encapsulates the conceptual
richness of the myth. The *ossa* (the bones) that the poet refers to in *vox tantum
atque ossa supersunt* sounds like the Greek ὄσσα, a word for an awesome voice
in Greek. But the bilingual pun (a staple of Ovidian wit) does not just assert
the identity of Echo: it points to the fundamental problem she embodies (or
disembodies?), that of the nature of the voice, straddling domains between
the material and the immaterial, the sensual and the senseless, the personal
and the impersonal and hints at the fascination the voice still exercises over
listeners.

Bibliography

Ahl, F. (1985). *Metaformations: Soundplay and Wordplay in Ovid and Other Classical
    Poets*. Ithaca: Cornell University Press.

Anderson, W.S. (1997). *Ovid's Metamorphoses, books 1-5*. Norman: University of
    Oklahoma Press.

Barchiesi, A. (2006). Music for monsters: Ovid's *Metamorphoses*, Bucolic Evolution,
    and Bucolic Criticism. In: M. Fantuzzi and T. Papanghelis, eds, *Brill's Companion to
    Greek and Latin Pastoral*, Leiden: Brill, pp. 403-25.

Barchiesi, A. and Rosati, G. (2007). *Ovidio, Metamorfosi—vol. 2: libri III-IV*. Roma/
    Milano: Mondadori.

Beckett, S. (2014). *Echo's Bones*, ed. Mark Nixon. London: Grove Press.

Berger, A.-E. (1996). Dernières nouvelles d'Écho. *Littérature* 102, pp. 71-90.

Bonadeo, A. (2003). *Mito e natura allo specchio: l'eco nel pensiero greco e latino*. Pisa:
    ETS.

Bonadeo, A. (2004). Tra ripetizione fonica e memoria poetica: l'eco, da imago vocis a icona intertestuale. In: C. Darbo-Peschanski, ed., *La citation dans l'Antiquité*. Grenoble: Millon, pp. 245-56.

Butler, S. (2015). *The Ancient Phonograph*. New York: Zone Books.

Cavarero, A. (2005). *For More Than One Voice: Toward a Philosophy of Vocal Expression*. Stanford, CA: Stanford University Press.

Connor, S. (2000). *Dumbstruck: A Cultural History of Ventriloquism*. Oxford/New York: Oxford University Press.

Dolar, M. (2006). *A Voice and Nothing More*. Cambridge, MA: The MIT Press.

Ford, A.L. (1992). *Homer: The Poetry of the Past*. Ithaca, NY: Cornell University Press.

Gély-Ghedira, V. (2000). *La nostalgie du moi: Echo dans la littérature européenne*. Paris: Presses universitaires de France.

Gützwiller, K. (2002). Art's Echo: The Tradition of Hellenistic Ecphrastic Epigram. In: M.A. Harder, R. Regtuit and G.C. Wakker, eds, *Hellenistic Epigrams*. Leuven: Peeters, pp. 85-112.

Hardie, P.R. (2002). *Ovid's Poetics of Illusion*. Cambridge, UK/New York: Cambridge Uniersity Press.

Hinds, S. (1987). *The Metamorphosis of Persephone: Ovid and the Self-conscious Muse*. New Rochelle, NY: Cambridge University Press.

Hinds, S. (1997). *Allusion and Intertext: Dynamics of Appropriation in Roman Poetry*. Cambridge, UK/New York: Cambridge Uniersity Press.

Hollander, J. (1981). *The Figure of Echo: A Mode of Allusion in Milton and After*. Berkeley: University of California Press.

Kane, B. (2014). *Sound Unseen: Acousmatic Sound in Theory and Practice*. Oxford: Oxford University Press.

Kenney, E.J. (1998). Introduction, Historical Sketches, and Explanatory Notes. In: *Ovid: Metamorphoses*, transl. by A.D. Melville. Oxford: Oxford University Press.

Koenen, M. (2004). "Loca loquuntur". Lucretius' Explanation of the Echo and Other Acoustic Phenomena in DRN 4.563-614. *Mnemosyne* 57.6, pp. 698-724.

LaBelle, B. (2014). *Lexicon of the Mouth: Poetics and Politics of Voice and the Oral Imaginary*. New York: Bloomsbury Publishing.

Lachenaud, G. (2013). *Les routes de la voix: l'antiquité grecque et le mystère de la voix*. Paris: Les Belles Lettres.

Lowrie, M. (2009). *Writing, Performance, and Authority in Augustan Rome*. Oxford/New York: Oxford University Press.

Michalopoulos, A. (2001). *Ancient Etymologies in Ovid's Metamorphoses: A Commented Lexicon*. Leeds: F. Cairns.

Mitsis, P. and Ziogas, I. (2016). *Wordplay and Powerplay in Latin Poetry*. Berlin/Boston: De Gruyter.

Myers, K.S. (1994). *Ovid's Causes: Cosmogony and Aetiology in the Metamorphoses*. Ann Arbor: University of Michigan Press.

Nowell Smith, D. (2015). *On Voice in Poetry: The Work of Animation*. New York: Palgrave Macmillan.

O'Hara, J.J. (1996). *True Names: Vergil and the Alexandrian Tradition of Etymological Wordplay*. Ann Arbor: The University of Michigan Press.

Pucci, P. (1997). *The Song of the Sirens: Essays on Homer*. Lanham: Rowman & Littlefield.

Raval, S. (2003). Stealing the language: Echo in *Metamorphoses* 3. In: P. Thibodeau and H. Haskell, eds, *Being There Together—Essays in Honor of Michael C.J. Putnam on the Occasion of his Seventieth Birthday*. Afton: Afton Historical Society Press, pp. 204-21.

Rosati, G. (1976). Narciso o l'illusione dissolta. *Maia* 28.2, pp. 83-108.

Rosati, G. (1983). *Narciso e Pigmalione: illusione e spettacolo nelle Metamorfosi di Ovidio*. Firenze: Sansoni.

Spivak, G.C. (1993). Echo. *New Literary History* 24.1, pp. 17-43.

Tissol, G. (1997). *The Face of Nature: Wit, Narrative, and Cosmic Origins in Ovid's Metamorphoses*. Princeton, NJ: Princeton University Press.

Centaur-Musicians in Classical Iconography

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Abstract

Centaurs, hybrid mythical beings, were associated with barbarism in antiquity, due to
the fact that the widely disseminated iconography of the Centauromachy portrayed
them as violent creatures against the Lapiths, creating an opposition between man/
beast, order/chaos. However, the role of the divine centaur Chiron as Achilles' teacher
offered another vision of these beings, especially in connection with music. This paper
proposes a new interpretation of the iconographic evolution of the centaurs in asso-
ciation with music: as part of the heroes' education, the Dionysian and Marine thiasos
and their presence in funerary art. A progressively humanised representation of these
creatures might be explained by the role of music as a civilising influence, enabling
their elevation to a higher spiritual level and as a way to obtain immortality.

Keywords

Centaurs – Chiron – music – Dionysian thiasos – marine thiasos – afterlife

1   An Approach to the Iconography of Centaurs

Centaurs (Κένταυροι in Greek) are, *grosso modo*, hybrid beings of both human
and equine nature. With this generic name, we designate not only the di-
vine centaur, Chiron, but also the different breeds of centaurs: the ones from

Thessaly, the Peloponnese, Cyprus and others, such as the marine centaurs and the centauresses.

Classical iconography shows four prototypes of centaurs. The first depicts a man with a horse body attached to his back, a prototype known from the tenth century BC and usually associated with Chiron[1] until the end of the fifth century BC. Among the most ancient examples of this prototype is the 'Lefkandi centaur',[2] a terracotta dated from the tenth century BC and preserved in the Eretria Museum (published by Desborough 1970, 21-30), which according to Hurwit (1985, 61), is the first iconographic representation of Chiron. The second prototype depicts a creature with a human head, torso, and arms but equine lower limbs. This is the most popular prototype of centaurs as generic beings, profusely disseminated throughout Greek pottery, in black and red figures alike (see S.2). The face usually appears grotesque, similar to satyrs, with a snub nose, wide forehead and animal ears. The third prototype follows the model of the second one, but with female anatomy (Κενταυρίδες). This motif originated in the Hellenistic period, while the most interesting examples are to be found in the Roman world, particularly in the sarcophagi which show a naked female torso with animal ears. Philostratus and Ovid were especially interested in this iconography.[3] The last prototype, also present in Hellenistic and Roman art, depicts the *ichthyokentauroi*, creatures with a human head, torso and arms and an equine body with a fish fin. Hyginus (*Fab*. 197) and a short entry in the lexicon *Suda* (α 4655 Adler) accounted for their existence in antiquity.

The repertoire of motifs offered by Greek iconography on centaurs is, overall, very limited. The most recurrent motif was the Centauromachy, a topic that acquired political connotations as a symbol of the confrontation between Greeks and Barbarians/Persians. Other popular topics were the abduction of nymphs, the instruction of heroes and the encounter with Heracles. Within these motifs, there is absolutely no evidence in the Greek iconography from the Archaic and Classical period that could suggest any musical inclination in these creatures, let alone any trace of the humanised prototypes from the aforementioned icons.

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[1] Occasionally, the centaur Pholo is depicted (while fighting Heracles) according to this iconographical model, typical of the Archaic style. See: Musée du Louvre, Paris, France Artist/ Maker Rider Painter Heracles and Pholus (?). Laconian black-figured dinos, ca. 560/540 BC.

[2] For a reproduction of this artefact, see the final sitography, item S.1. The reproductions of the other artefacts included in the sitography are referred to throughout the paper by means of 'S' followed by a number.

[3] Cf. Philostr. *Im*. 2.3 and Ov. *Met*. 12.210.

Chiron was an exceptional centaur, a centaur-god of immortal nature. According to Ps.-Apollodorus (1.8-9), he was the son of Kronos, conceived during an extramarital affair with the nymph Philyra and thus, half-brother of Zeus. He married Chariklo, Apollo's daughter according to some sources, a Pelonides nymph often regarded as the mother of some Greek heroes. Ancient authors considered him the wisest and fairest of the Centaurs (cf. *Il.* 11.831), a pious and kind-hearted friend of men (cf. Pind. *P.* 3.1; Eur. *IA* 926).

Greek pottery shows the wise centaur as a fully dressed bearded man (hence, humanised, far from the brutality evoked by his hybrid nature) with the croup and the horse hindquarters added to his body, especially in the oldest examples. This iconography may have had its origins in the theatre, due to scenographic limitations, and hence could have become popular throughout Greece. Chiron's iconography, thus conceived, was the first to emerge in Greek art, beginning in the tenth century BC and then becoming quite popular during the Orientalizing and Archaic periods. Although still present in the Classical age, however, it was progressively phased out over time. The centaur-god was often represented with heroes, especially Achilles. His divine status is plainly shown in the François Vase (Firenze, Museo Archeologico Nazionale, 4209) where Chiron is depicted among other gods as a guest at the nuptial banquet of Thetis and Peleus.

2   Centaur-Musicians

2.1   *Chiron*

As the mentor of great Greek heroes such as Jason, Peleus, Asclepius, Aristaius and Achilles, Chiron taught not only hunting, medicine, geography and the arts of divination, which he had learned from Apollo and Artemis, but also music.[4] The most popular iconography in Greek art presents him as a mentor and teacher of the young Achilles, entrusted to him by Peleus.[5] We find the portrayal of an iconographical model of this kind in Philostratus the Elder's *Imagines* 2.2, titled "The Education of Achilles", presented as a description of one of the Greek paintings[6] seen by the speaker in a gallery at Naples:

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4   Cf. Pi. *P.* 9.65; Xen. *Ages.* 1; Philostr. *Ep.* 9.2.

5   For a later development of the myth, see the gem now at the Bern Kunstmuseum (Merz Collection, DL636) in which Apollo entrusts the education of Asclepius to the centaur Chiron, who taught him medicine and botany.

6   The question whether the painting described actually existed has received a great deal of scholarly attention. For a recent summary of the *status quaestionis*, see Miles 2014.

This Achilles, however, a child not yet conscious of valour, whom Cheiron still nourishes upon milk and marrow and honey, he has offered to the painter as a delicate, sport-loving child and already light of foot [...]. Cheiron flatters him by saying that he catches hares like a lion and vies with fawns in running; at any rate, he has just caught a fawn and comes to Cheiron to claim his reward, and Cheiron, delighting to be asked, stands with fore-legs bent so as to be on a level with the boy and offers him apples fair and fragrant from the fold of his garment—for their very fragrance seems to be depicted—and with his hand he offers him a honeycomb dripping with honey, thanks to the diligent foraging of the bees. For when bees find good meadows and become big with honey, the combs get filled to overflowing and their cells pour it forth. Now Cheiron is painted in every respect like a centaur; yet to combine a horse and human body is no wondrous deed, but to gloss over the juncture and make the two one into one whole and, by Zeus, cause one to end and the other to begin in such wise as to elude the eye of the observer who should try to detect where the human body ends, this seems to me to demand an excellent painter. That the expression seen in the eye of Cheiron is gentle is the result of his justice and the wisdom that he has acquired through justice, but the lyre also does its part, through whose music he has become cultured; but now there is also something of cozening in his look, no doubt because Cheiron knows that this soothes children and nurtures them better than milk.

   This is the scene at the entrance of the cave; and the boy out on the plain, the one who is sporting on the back of the centaur as if it were a horse, is still the same boy; for Cheiron is teaching Achilles to ride horseback and to use him exactly as a horse, and he measures his gait to what the boy can endure, and turning around he smiles at the boy when he laughs aloud with enjoyment, and all but says to him, 'Lo, my hoofs paw the ground for you without use of spur; lo, I even urge you on; the horse is indeed a spirited animal and gives no ground for laughter. For although you have been taught by me thus gently the art of horsemanship, divine boy, and are suited to such a horse as I, some day you shall ride on Xanthos and Balios; and you shall take many cities and slay many men, you merely running and they trying to escape you'. Such is Cheiron's prophecy for the boy, a prophecy fair and auspicious and quite unlike that of Xanthos.

TRANSL. BY FAIRBANKS 2014, 133-7

The first mention of Achilles as a lyre player appears already at *Il.* 9.179-88, which describes the arrival of the embassy sent by Agamemnon with the order

to persuade him to give up his anger and return to combat. The embassy finds the son of Peleus while he is singing and playing his φόρμιγξ, but the centaur is not mentioned here as Achilles' music teacher:

> They found Achilles refreshing his spirit in the bright and beautiful sound of the lyre, wonderfully made. The bridge on it was silver, loot from the time when he burned the town of Eetion. With it now he refreshed his spirit and he sang the famous deeds of men. Patroklos sat opposite to him, all alone, silent, waiting until the grandson of Aiakos should finish his singing. The two men came up, and Odysseus stood before Achilles, who, amazed, leaped from his seat holding the lyre. Patroklos too rose when he saw them.
>
> TRANSL. BY POWELL 2014, 218[7]

Only later would literary references to Chiron as a musician appear. While the idea that the centaur taught medicine to Achilles is Homeric (cf. *Il.* 11.832) and continues to be mentioned by later authors (Sen. *Tro.* 830ff.; V. Fl. 1.406ff.), there is no reference to any music lesson before Ovid (see *Fast.* 5.379-414).

> Before the fourth night Chiron will display his stars,
> that hybrid man mixed with the body of a tawny horse.
> Mount Pelion of Haemonia faces south;
> the summit greens with pine, the rest with oak.
> Philyra's son claimed it; there's a cave of ancient rock,
> where, they record, the good old man [i.e. Chiron] resided.
> He is believed to have detained in lyric song
> the hands destined to send Hector to death.
> Alcides arrived with his labours partly complete [...].
> Achilles' hands could not resist the brazen impulse
> to touch the shaggy skin and its bristles.
> While the old man [i.e., Chiron] fingers the foul, poisoned shafts,
> an arrow slips out and stabs his left foot [...].
> The blood of Lerna's Hydra and the centaur's blood
> mingled, and gave no time for rescue.
> Achilles stood tar-soaked, as if before his sire:
> the dying Peleus would be mourned like this.

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7   Even though some authors, like Ovid (*Tr.* 4.1.15f.), saw Achilles' singing as a means of consolation for the loss of Briseis, others believed that the notion of 'glory or men' was the subject of the song: it provided the necessary stimulus for the hero who, according to the narrative of the *Iliad*, would soon resume his military activities.

His loving hands often stroked Chiron's frail hands
(rewarding the teacher with values learnt).
He kissed him often, and said to him where he lay:
'Live, I beg you; don't leave me, dear father!'
The ninth day arrived, when you, righteous Chiron
encircled yourself with twice seven stars.

TRANSL. BY BOYLE AND WOODARD 2000

Even if we take into account a *scholion* to *Iliad* 16.37 (quoted by Roussel 1991, 115) saying that, according to Lycophron, the centaur had taught the son of Peleus τὴν ἰατρικὴν τέχνην καὶ λυρικὴν καὶ μουσικήν ("the medical, lyrical and musical arts"), the hypothesis suggested by Guerrini (1958-1959, 50-2) that Achilles' musical education might have appeared in a lost Hellenistic text by Lycophron remains pure speculation. In accordance with the examples collected by Kossatz-Deissmann (1981), the artistic representations of Chiron's music lessons date only from Roman times. Even though there is no textual reference to his activity as a music teacher prior to Roman times, we would like to draw attention to a Hellenistic testimony on Chiron's reputation as a musician: the coins minted by Prusias II of Bithynia (183-149 BC) (Figure 1). In the obverse of the coin we see Dionysus' head, while in its reverse it is possible to identify very clearly the image of a civilized centaur playing the lyre.[8] The association of this mythical figure with Dionysus will then become very significant in Roman art, where centaurs will often be part of the triumphal processions of the god, always playing music. There is therefore, no doubt that the centaur Chiron started to gain popularity as a musician during the Hellenistic period, despite the allegedly lost *Achilleis*.

The magnificent fresco from the Ercolano basilica (Napoli, Museo Nazionale Archeologico, inv. 9109; cf. *LIMC* 211/451) (Figure 2) may be debtor, to a greater or lesser extent, of a Greek original lost in time, which could have also served as the model for the sculpture in Saepta Iulia mentioned (without describing it) by Pliny the Elder (*HN* 36.4): "There is just as much dispute as to the makers of the Olympus and Pan and the Chiron With Achilles in the Voting Enclosure (Saepta Iulia), even though their fame pronounces them to be so valuable that their keepers must answer for their safety with their lives" (transl. by Eichholz 1962, 23).

This painting was found during the first excavations in Ercolano, in 1739, and soon became very popular, being reproduced in different artistic media during the eighteenth and nineteenth centuries. The centaur appears in a human-horse shape, the most characteristic representation in Roman art, and his back is covered by an animal skin cape, as occasionally seen in other

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8   See British Museum, 1841, B.2389; G.2151; RPK, p158B.2; 1920,0611.262.

FIGURE 1   *Coin issued by the King Prusias II of Bythina. 2nd century BC.*

representations of centaurs too. But his expression is calm and his temples
are crowned with laurel, crediting the character with a more hieratic status,
more typical of a musician/poet. Such a representation emphasises the human
nature of Chiron, in opposition to the brutality of other centaurs. With the
plectrum in his right hand, he strikes the strings of the lyre, while a young half-
naked Achilles of Praxitelian physiognomy listens attentively to his teachings.
This image has been considered by some scholars as a re-interpretation of the
sculptural groups of the Saepta, as may be inferred not only from the posi-
tion of the centaurs' hindquarters and the noticeable plasticity of the body (of
statuary resemblance), but also from the architectural background on which
the two figures stand out, as Kelsey pointed out (1908, 33). Other Pompeian
paintings might have also been influenced by the sculptural group, such as one
of the frescoes from the 'Casa delle suonatrici' (Pompeii IX, 3-5).[9] The same
iconographic elements also appear later on in some sarcophagus reliefs (as, for
instance the Sarcophagus Strogonoff, at the Ermitage Museum, the Hierapetra
Sarcophagus, at the British Museum, and the Sarcophagus of Metilia Troquata
at the National Museum in Naples).[10]

Moreover, the great influence of this painting can be noted in examples of
minor arts, like lamps and gems; in glyptics, in particular, we may find numer-
ous examples of motifs following these patterns. The iconography of Chiron's
music lesson, similarly represented by artists and craftsmen, subsequently had
a great development in the last century of the Roman Republic and in the first

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9   See *Lexicon Iconographicum Mythologiae Classicae* (henceforth *LIMC*) 235/451 (S.3).
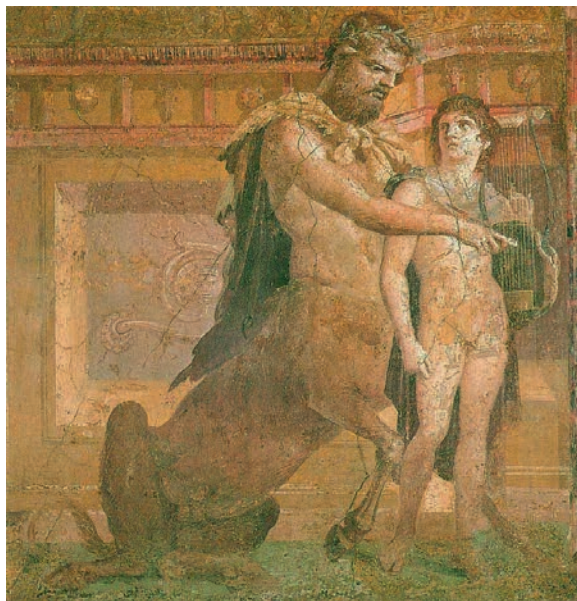10   See *LIMC* 214/451 (S.4).

ones of the Roman Empire, as the numerous gems where the wise centaur teaches music to Achilles well attest.[11]

By tracing the iconographic parallels of this subject, we have been able to verify that musical education also appears as a secondary motif in the representations of other episodes of the hero's life. For example, it is depicted as part of the shield's decoration in the mosaic representing Achilles recognised by Odysseus at Skyros in the 'House of Apollo' in Pompeii (VI.7.23; see S.8). It is also a secondary motif in the magnificent megalography of the 4th style that gives the name to the 'House of wounded Adonis' in Pompeii (VI.7.18). Adonis dying in Aphrodite's arms is the central theme of this composition (love and death) and is flanked by two representations of the music lesson, which imitate small-scale sculptural groups painted in grisaille. On the right side we see Chiron holding the lyre, while on the left side Achilles is playing the stringed instrument.[12]

Another magnificent example of the same motif is the so-called 'Tensa Capitolina' (Rome, Vatican Museums, 966), a ceremonial carriage (fourth century BC) decorated with reliefs on bronze plates depicting scenes from Achilles' life, where his musical instruction cannot be missed.[13] Equally interesting are the oil

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11   London, British Museum, 3191-3192 (cf. *LIMC* 396/451 and 397/451; see S.5f.); London, British Museum, 1923,0401.772 (see S.7).

12   Cf. *LIMC* 238/451 (see S.9).

13   Cf. *LIMC* 324/426 (see S.10.).

FIGURE 3   *Oil lamp with Chiron the centaur and Achilles. Copenhagen, Thorvaldsen Museum.*

lamp preserved in the Thorvaldsen Museum, H1176 (Figure 3) and the gem in the Collection Walters (42.1161; see S.11), showing Chiron half man/half horse placing one arm on a young naked Achilles, who holds the lyre in one of his hands. The idea of the moral effects that music has on human character and its consequent power on education was deeply rooted in Greek and Roman antiquity (cf. Anderson 1966 and Mathiesen 1984, 264ff.). Music (including melodies and rhythms) could cause diverse effects on the human mood: a dichotomy was already presented in the *Iliad*, where Homer distinguished the effeminate

lyre of Paris (*Il.* 3.54f.) from the heroic lyre of Achilles (*Il.* 10.189). According to Ovid, Chiron appeased the impetuous character of the young Achilles (*Ars* 1.11f.) while Seneca (*Tr.* 832-5) points out how Chiron increased the impetuousness of the hero with his music. Not every genre of music or every mode was appropriate for education (see the well-known Plat. *Resp.* 398c-400d). In his *Punica*, Silius Italicus attributed to Chiron a song of cosmogonic theme (*Pun.* 11.453-8), clearly differentiating him from the corrupting chant of the bard Teutras. As Antonio Rio (2012, 387) has pointed out, these verses, which had been discussed by other authors, fit perfectly in this paradigm if we relate them to the moral effects and the pedagogical value of music.[14] Silius Italicus adds an important detail to the myth specifying the subject of Chiron's song (a cosmogony, a philosophical song), with which the centaur trains his pupil.

2.2   *Other Centaur-Musicians*

The earlier representation of a centaur associated with music that we have been able to identify is the image decorating the central umbo of a warrior's shield depicted in an Attic red-figured *pelikē* from the fifth century BC (Private collection).[15] It is probably an icon of apotropaic nature, like so many others that usually ornate the soldiers' arms. Here the centaur is depicted playing the *barbiton*, an instrument frequently associated with the symposium and the Dionysian entourages. Given the nature of this depiction and its unusual location, it is not possible to identify this centaur as Chiron: nevertheless, this is a very important iconographic artefact attesting the connection of centaurs with music since the Classical period.

    As already mentioned, the association of Chiron with music became a widely disseminated motif in the Hellenistic period. In Roman art this idea was extended to his peers too, the other centaurs: their iconographic models developed human instead of bestial traits, representing them increasingly as devoted to amorous idylls and music. Sometimes the old brutal customs of the Pelion inhabitants were still depicted,[16] but the majority of artists preferred to show them in bucolic scenes, accompanied by erotes, musical instruments and female centauresses or nymphs. Their wild side was replaced by a sweet amorous passion. Young or old, the association of centaurs with various musical instruments (not just *kitharai*, but also rattles, panpipes, cymbals and other instruments of Dionysian nature) became increasingly frequent. This iconographic model turned out to be very suitable for the decoration of villas and

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14   Cf. *LIMC* 370/451.

15   Cf. *LIMC* 370/451 (see S.12).

16   See the mosaic depicting a pair of centaurs fighting cats of prey from Hadrian's villa, c. 130 BC (Berlin, Altes Museum, Nr. Mos. 1); cf. Brehme 2007, 135ff. no. 78.

private gardens, frescoes, fountains and any decorative fitting, with no apparent hidden symbolism. In glyptics, however, we believe that the representation of the centaur-musicians could be interpreted as a talisman for protection.

Among the most interesting examples of this iconography, which presents the centaur subjugated by love and music, are the magnificent 'Centauro Borghese' (Musee du Louvre, Ma 562)[17] and the famous Capitoline centaurs (Furietti Centaurs) young and old, where the presence of the *syrinx* (Figure 5) and the *krotala* (Figure 4) indicate their musical interests. This pair of centaurs sculpted in grey marble, preserved today in the Capitoline Museums (MC 656 and 658), were found in the Villa Adriana in Tivoli by cardinal Alessandro Furietti in 1736. The sculptures bear the signature of the Greek artists Aristeas and Papias of Aphrodisias, one of the most remarkable sculpture production centres in Asia Minor (see S.14f.). The old centaur is a pathetic figure, a victim of amorous passion, hand-tied in a similar way to the Borghese centaur. The young centaur, showing a smiling face, has one of his hands raised. Van de Grift (1984, 383) attributed the difference in representing the characters of the two figures to the effects that love can produce in the soul, a subject very popular in Hellenistic poetry, whose origin can be traced back to Plato's *Phaedrus*. The topic of centaurs in love might be also connected to the beautiful story of love and death of Cyllarus and Hylomene narrated by Ovid in the *Metamorphoses*, an episode inserted in the description of the battle between the Lapiths and the centaurs (*Met.* 12.393-429, on which see DeBrohun 2004).

In the triclinium of the so called 'Villa of Cicero', located on the outskirts of Pompeii (Pompeii, Herculaneum Gate West Side, HGW06) a series of elegant paintings on a black background with the depiction of centaurs was found. In these frescoes, a centaur and a centauress instruct two young boys in the art of music (Napoli, Museo Archeologico Nazionale, inv. 9133).[18] The subject of the centaurs' family, and especially the presence of the figure of the centauress (both of them motifs of Hellenistic origin), became widespread in Roman art. In these frescoes preserved in Naples, the subject is depicted with exquisite technique, according to the stylistic assumptions of the so-called 3rd style. A youthful and beardless centaur, represented in full gallop, instructs a young man (who seems to attend to the lesson zealously) in the art of the lyre. The male centaur holds a thyrsos and a tympanum, traditional Dionysian attributes that seem to have contaminated these iconographic themes. In front of

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17   This famous sculpture group is a Roman copy (first or second century AD) of a Greek original from Hellenistic times (from the second century BC), found in Rome in the seventeenth century (see S.13).

18   Rollicking centaurs, first century BC.

FIGURE 4   *Old centaur by Aristeas and Papias of Aphrodisias. Gray-black marble, Roman copy (117-138 AD) after Hellenistic original. Roma, Musei Capitolini.*
PHOTOGRAPH: JASTROW (PUBLIC DOMAIN).

FIGURE 5   *Young centaur by Aristeas and Papias of Aphrodisias. Lucullan marble, Roman copy after Hellenistic original. Roma, Musei Capitolini.*

PHOTOGRAPH: JASTROW (PUBLIC DOMAIN).

the two figures, a centauress (also in a dynamic position), plays the lyre and the *krotala* with a young man next to her (see S.16).

Oil lamps,[19] gems[20] and many other sorts of artistic media continued to represent this image of centaurs associated with music, wine and love. Among them, luxury tableware especially stands out: great pateras, jars or cups (*skyphoi*) made out of gilded silver. One of the most magnificent examples in the Hispanic art is the Santisteban del Puerto *patera*, from Jaen, showing an eclectic iconography that dates back to the second century BC (Madrid, Museo Arqueológico Nacional, inv. 1917/39/1). Its central clypeus shows a motif of Iberian roots (a wolf devouring a human head surrounded by snakes), encircled by a purely Hellenistic motif (centaurs and centauresses carrying musical instruments in a nocturnal banquet, with erotes and trophies) (Figures 6 and 7; see also S.18). This peculiar depiction is deeply rooted in the Hellenistic iconographic repertoire, not only for the presence of young centaurs but also for the presence of centauresses. There are nine centaurs separated by trees in a procession or thiasos, represented in motion towards the same direction, with their clothes moved by the wind. Four of the nine figures play musical instruments: one centauress blows the *tibia* (*tibicina*), another one hits the cymbals and a third one is holding a tympanum, while a centaur strikes the lyre with a plectrum. The rest of the figures hold in their hands a tray of fruits, a crater, a torch and a *patera*. Griñó and Olmos (1982, 15) have pointed out that this iconography was used to describe the blessed and happy life of the dead nobleman in the underworld (including hunting, banqueting, music, wine, festive conversation, occasional drunkenness, etc.). The interpretation of these iconographic motifs is confirmed by the morphology of the work, which suggests that the object was used in a funerary context.

Dated from the first century AD are the magnificent cups (*skyphoi*) known as the 'Berthouville hoard', a treasure composed of one hundred silver objects discovered in Berthouville, near Evreus, in 1830. They are ex-votos offered by Q. Domitius Tutus in a small shrine dedicated to Mercury Canetonensis. This collection (conserved in the Cabinet of Médailles, Paris, Bibliothèque Nationale) includes, on the one hand, some tableware pieces from Italian workshops (first century AD) and, on the other hand, votive pieces from the workshops of Gaul (second century AD). In these artworks the main decorative motif consists in mourning centaurs and centauresses associated with erotes,

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19   See the centaur playing the lyre now at Johns Hopkins Archaeological Museum (Accession no. JHUAM HT 321), from the first century BC or first century AD. Provenance: Syria.

20   Braunschweig, Herzog Anton Ulrich-Museum, AGD III 174, Gem 184 (cf. *LIMC* 65/451; see S.17).

FIGURE 6   *Patera from Santiesteban del Puerto. Madrid, Museo Arqueológico*
             Nacional. 250-76 BC (estimated chronology).
             © MINISTERIO DE EDUCACIÓN, CULTURA Y DEPORTE.

holding *kithara, tympanon* and *krotala* in an eminently Dionysian context as
assumed by Grift (1984, 377-88), realising a suitable subject for the container
they decorate (Figures 8 and 9; see also S.19). The scholar carried out a detailed
analysis of the *skyphoi*, searching for the most remarkable iconographic par-
allels and highlighting the contrast of passions (joy, suffering, ecstasy, tran-
quillity) that may be identified in the centaurs represented on these pieces of
artwork. Grift also suggested that the use of Dionysian iconography in private
contexts, at the beginning of the Imperial era, responded to the same ideol-
ogy reflected by the poets of the time (Diodorus Siculus, Horace, Propertius
and Rufinus). Their writings expressed a certain moralization of the theme,
which should be understood as the reflection of the dual nature of Dionysus
(Dionysus Dichotomus), whose power is associated with life and fecundity. In
Grift's own words, "the baffling profusion of Bacchic images does not represent
some haphazard revel but instead a carefully orchestrated allegory concerned
with the two-fold nature of Dionysus. The leading players in this entertaining

FIGURE 7   *Patera from Santiesteban del Puerto. Madrid, Museo Arqueológico
Nacional. 250-76 BC (estimated chronology).*

drama are the centaurs. The contrasting demeanor of each couple demon-
strates the frenzied freedom and painful enslavement induced by the god's
peculiar nature" (Grift 1984, 385).

In our opinion, the dual Dionysian nature is evident not only in the expres-
sion and character of the figures of the centaurs and centauresses, but also
in the variety of musical instruments associated with them, including cordo-
phones, aerophones and idiophones. Moreover, it is worth noting that this rich
iconographic repertoire of Bacchic motifs was to be perpetuated for a long
time in Roman art, being one of the most characteristic subjects in the decora-
tion sarcophagi from the third century AD.

As we have already noted, this association of the centaurs with the
Dionysian world originated in Hellenistic art and was later reflected in many
artistic media, especially during the Roman Imperial period. It was regarded
as an appropriate subject for different contexts, from the banquet to the fu-
nerary sphere. It can be simply a decorative motif or, as we have pointed out,
susceptible to a process of allegorization. On many occasions, the centaur-
musicians precede the triumphal chariot of Dionysus and Ariadne, as in the
mosaic of the 'House of Aion' in Nea Paphos, Cyprus, which has been studied

FIGURE 8　　*Detail of a silver cup, part of the Berthouville treasure. Paris, Bibliothèque Nationale, Cabinet of Médailles, c. 50 AD.*

by Olszewski (2013) or in the less famous mosaic found in Sheik Zuweid (Sinai; see S.20).

3　　Centaur-Musicians in Funerary Contexts

In this last section of the paper, we will focus our attention on Roman funerary contexts, in which the presence of centaur-musicians (or more generally, centaurs associated with music) is massive. The relationship of the centaurs with the underworld is attested in several Latin literary sources in which, along with other hybrid and monstrous beings, they are called 'guardians' of the Hades' gates. See, for example, Verg. *Aen*. 6.282-289 and Sen. *HF* 768-781:

> The God of Sleep there hides his heavy head, and empty dreams on every leaf are spread. Of various forms unnumbered spectres more, Centaurs and double shapes besiege the door. Before the passage, horrid Hydra stands, and Briareus with all his hundred hands; Gorgons, Geryon with his triple frame, and vain Chimaera vomits empty flame.
>
> TRANSL. BY DRYDEN 2009, 224

FIGURE 9   *Detail of a silver cup, part of the Berthouville treasure. Paris, Bibliothèque Nationale, Cabinet of Médailles, c. 50 AD.*

> As ferryman, he controls his craft himself with a long pole. He was bring-ing the boat to shore empty of cargo to collect more shades. Alcides de-manded room, but the crowd gave way, dread Charon shouted, 'Where are you heading so boldly? Check your hurried steps'. Alcmene's son brooked no delay, but coerced the sailor into subjection with his own pole, and climbed aboard. The skiff, which could carry crowds, foundered beneath this one man; it settled overburdened in the water, and drank in the Lethe on each side as it rocked. Then the monsters he had conquered panicked, savage Centaurs […] seeking the farthest recesses of the Stygian swamp, the Lernaean labour submerged its prolific heads.
>
> TRANSL. BY FITCH 2014, 111

The first representation of this motif is to be found in Archaic period Etruscan art. The pediment of one of the *aedicula* in the columbarium of Pomponius Hylas, (Roma, Via di Porta San Sebastiano) is from Roman times, as noted by

Newton and Ashby (1910). This stucco relief from the Flavian period depicts Chiron's music lesson to the young Achilles, reproducing the Hellenistic model mentioned above. The heroic death (symbolised by Achilles' character) seems hence to have been an appropriate topic for the funerary context. Moreover, in the same columbarium, there is also a painted pediment showing a fresco with a young naked male figure (identified as the personification of Fate) flanked by two icthyocentaurs blowing into their *tibiae*, according to a very well-known prototype in Roman art (see S.22).

As the culmination of this long iconographic tradition, we should mention that the presence of centaur-musicians became extremely common especially in Roman sarcophagi between the end of the second and the third centuries AD. The Bacchic thiasos started to appear as a popular motif on the front of marbles. It was not just an ornamental design: it conveyed a deeper symbolic message, the promise of resurrection that Dionysus offered in his Mysteries. This is the reason why, in our opinion, it became a very suitable motif, full of decorum, for a funerary monument. In these reliefs, the processional members play their favourite instruments (*aulos, syrinx, krotala, tympanon*), while performing orgiastic dances at a frantic rhythm. Centaurs appear as participants of the Dionysian procession, becoming part of the promise of resurrection that the god of wine and his merry entourage symbolically evoked. Some of them are young, some of them are old: even children are represented, mostly playing *kitharai* and pipes.[21]

As an additional element, let us remember that the marine creatures were those in charge of transporting the soul of the dead to the great beyond (cf. Rumpf 1939). For this very reason, the marine mythological beings also became very popular motifs in the decoration of Roman sarcophagi, where the marine centaurs (*ichthyokentauroi*) hold the clypeus with the portrait of the deceased and, occasionally, are depicted in idylls with the marine nymphs, delighting them with the sound of their instruments (Figure 10). Rodríguez (1993) has highlighted that this voyage, conceived of as a pleasing one, was always accompanied by music, offering a positive image of death and its transition and reducing the sorrow and favouring liberation.

Leaving aside the representation of marine centaurs blowing conchs or *tubae* due to the affinity with the tritons (which appear in Pompeian frescoes and in the mosaics from the first and second century AD), the marine centaurs associated with the funerary context usually look mature, bearded and realizing a pathetic gesture, seeming to prefer the sweet sound of the lyre or the *kithara* to interact with the Nereids. There are many examples, with their

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21   See the sarcophagus from the British Museum, 1805,0703.130 (see S.22).

corresponding variants, in which the mythical beings of the sea become part of a marine thiasos, carrying the image of the deceased in a clypeus while playing music and romantically interacting with the Nereids during the journey to the Afterlife. Little *erotes* emphasize the erotic nature of the group, in many cases, also playing some musical instruments like the lyre and the *aulos* (and occasionally even shells or marine horns). Like any other sea creature, ichthyocentaurs symbolically guaranteed the successful transition of the soul the Underworld, an idea rooted in the classical tradition from the very beginning. As suggested by Zanker and Ewald (2012) and emphasised by Rodríguez (1993) and Koortbojian (1995), the Earth and the Sea, the two great telluric forces incarnated through the Dionysian and the marine thiasos, were profound expressions of life and death and acted as a promise of resurrection. As one example of this, we would like to mention the sarcophagus housed in the Museo Nazionale Romano (second half of the second century AD), whose front is decorated with a procession of Nereids riding on the back of four ichthyocentaur-musicians (two young and two mature), who respectively play a lyre, a conch and a *tibia*. The presence of small erotes suggests the idyll of these half-ferine beings with the beautiful marine nymphs.

Occasionally, the motif of Chiron's music lesson and his singing reappears in Roman sarcophagi. Such is the case of the sarcophagus found in Via Casilina (Torraccia, second half of the third century AD), where the scene is magnificently carved on both sides. This representation (Figure 11) follows the traditional models disseminated through the different artistic media to which we have already referred (see S.23).

Conclusions

Through this iconographic survey, we have been able to verify how, in the Greek imagination, the centaurs' figures were used to embody different ideas, whose semantic interpretation evolved over time. With the exception of wise Chiron (of divine lineage), instructor of heroes, the first centaurs mentioned in the literary sources are beings dominated by their bestial instincts, aliens to civilization and hospitality. Their legendary battle against the Greeks, the Centauromachy, was used in the decoration of public buildings to express political opposition between civilization and barbarism, order and chaos, Greeks and Barbarians.

These brutal beings were, then, gradually humanised in literary and artistic works throughout the Hellenistic period, progressively becoming musicians. Some authors, such as Ovid (quoted above) even referred to love

FIGURE 10   *Marine centaurs playing instruments, Sarcophagus. Roma, Museo Nazionale*
Romano, 2nd century AD.

FIGURE 11   *Roman sarcophagus, Achilles and Chiron. White marble. Roma, Museo Nazionale*
delle Terme. 2nd to 3rd century AD.

PHOTOGRAPH: JASTROW (PUBLIC DOMAIN).

stories associated with them. In our opinion, Chiron's fame and his uplifting
capacity for singing might have been one of the reasons behind this semiotic
metamorphosis, which overpowered their original wild nature. In her latest
work, Rodríguez (2013) has noted that other brutal beings, such as the cyclops
Polyphemus, were turned into musicians in the verses of bucolic poets.

As we have pointed out, the first iconographic testimony of a centaur as-
sociated with a musical instrument may be found in a shield's decoration on a
Greek vase of the Classical Period (cf. *supra*), depicted as an exceptional sub-
ject. The iconography of the centaur-musicians did not, then, become popular
until the third century BC, and this happened probably thanks to some (now
lost) literary sources and Roman monuments soon imitated in a multiplicity
of artistic media, such as the sculpture groups mentioned by Pliny the Elder in
Saepta Iulia. The most represented motif in the first years of the second cen-
tury BC was Chiron's music lesson to the young Achilles, of which the coinage

of King Prusias II of Bithyna is the earliest surviving example. Later the motif was repeated profusely in the Hellenistic glyptics (perhaps with a moralizing and apotropaic symbolism), in luxury tableware (the true meaning of which is now difficult to envisage) and in other works of a purely decorative nature, such as frescoes and mosaics in private villas.

In some cases, the subject of the centaur teaching Achilles became an iconographic motif in the funerary context too, not only because of the allusion to death and resurrection (through fame) of the Peleid, but also because some literary sources, as already mentioned, placed the centaurs at the doors of the Hades, transforming them into beings of the Underworld. In the funerary context, centaurs became common participants in the bacchanalian procession, where music was always present. In this context, their images were used to symbolise the victory over death. Some centaurs were even transformed into centaur-fish (*ichthyokentauroi*) and were erotically involved with beautiful Nereids: these scenes always included the presence of instrumental music (to which we may, perhaps, add the sea murmur and the rhythmal flow of the waves). The sweet music they played accompanied the deceased to their final resting place, an allusion to a pleasant journey to the Afterlife and eternal happiness.

Just as it happens in the myth of Orpheus and the animals, or in the famous romance between Polyphemus and Galatea, we believe that the metaphor underlying the iconographic image of the centaur-musicians is the immense power of music, able to appease anger (as in the case of Achilles) or to lessen the most bestial instincts and passions (as in the case of Chiron). This idea is closely related to education, civilization and, ultimately, the elevation of human beings, hence capable of achieving immortality (Figure 11).

Bibliography

Anderson, W.D. (1966). *Ethos and Education in Greek Music. The Evidence of Poetry and Philosophy*. Cambridge and London: Harvard University Press.

Boyle, A.J. and Woodard, R.D. (2000). *Ovid. Fasti.* London/New York: Penguin.

Brehme, S. (2007). *Die Antikensammlung. Altes Museum, Pergamonmuseum*. Third ed. Mainz: P. von Zabern.

DeBrohun, J.B. (2004). Centaurs in Love and War: Cyllarus and Hylonome in Ovid *Metamorphoses* 12.393-428. *AJPh* 125, pp. 417-52.

Desborough, V.R., Nicholls, R.V., Popham, M. (1970). An Euboean Centaur. *ABSA* 65, pp. 21-30.

Dryden, J. (2009). *Virgil. The Aeneid.* Auckland: The Floating Press.

Fairbanks, A. (2014). *Philostratus the Elder, Imagines. Philostratus the Younger, Imagines. Callistratus, Descriptions.* Cambridge, Mass.: Harvard University Press.

Fitch, J.G. (2014). *Seneca. Tragedies.* Cambridge, Mass.: Harvard University Press.

Grift, J. van de. (1984). Tears and Revel: The Allegory of the Berthouville Centaur Scyphi. *AJA* 88, pp. 377-88.

Griñó, B. and Olmos, R. (1982). *La pátera de Santisteban del Puerto (Jaén). Estudios de Iconografía del Museo Arqueológico Nacional.* Madrid: Dirección General de Bellas Artes.

Guerrini, L. (1958-1959). Infanzia di Achille e sua educazione presso Chirone. In: *Studi miscellanei* 1, Roma: L' Erma di Bretschneider, pp. 43-53.

Hurwit, J.M. (1985). *The Art and Culture of Early Greece 1100-480 BC*. Ithaca: Cornell University Press.

Kelsey, F.W. (1908). Codrus's Chiron and Painting from Herculaneum. *AJA* 12, pp. 30-8.

Koortbojian, M. (1995). *Myth, Meaning, and Memory on Roman Sarcophagi.* Berkeley: University of California Press.

Kossatz-Deissmann, A. (1981). Achilleus. *Lexicon Iconographicum Mythologiae Classicae* 1.1, pp. 37-200.

Lapatin, K. (2014). *The Berthouville Silver Treasure and Roman Luxury*. Los Angeles: The J. Paul Getty Museum.

Mathiesen, T.J. (1984). Harmonia and Ethos in Ancient Greek Music. *The Journal of Musicology* 3, pp. 264-79.

Miles, G. (2014). Genres of Painting and Genres of Text in the Imagines of Philostratus. In: B. Michelle, and Miles G., eds, *Approaches to Genre in the Ancient World*, Newcastle: Cambridge Scholars Publishing, pp. 123-41.

Miller, F.J. (2014). *Seneca the Younger. Complete Works. Troades.* London: Delphi Classics.

Newton, F.G., Ashby, T. (1910). The Columbarium of Pomponius Hylas. *PBSR* 5, pp. 462-71.

Olszewski, M. (2013). The iconographic programme of the Cyprus mosaic from the House of Aion reinterpreted as an anti-Christian polemic. In: W. Dobrowolski, ed., *Et in Arcadia ego: Studia memoriae Professoris Thomae Mikocki dicata*, Warsaw: Institute of Archaeology (Warsaw University), pp. 207-39.

Powell, B.B. (2013). *The Iliad. Homer*. Oxford: Oxford University Press.

Rackham, H., Jones, W.H.S., Eichholz, D.E. (1949-54). *Pliny. Natural History.* Cambridge, Mass./London: Harvard University Press.

Río, A. (2012). El canto de Quirón y el ethos de la música. *Emerita* 80, pp. 387-99.

Rodríguez, M.I. (2013). Iconografía de Polifemo: el cíclope enamorado. *De Arte* 12, pp. 7-26.

Rodríguez, M.I. (1993). *Posidón y el thíasos marino en el arte mediterráneo (desde sus orígenes hasta el siglo XV)*. Diss. Universidad Complutense de Madrid. DOI: <http://eprints.ucm.es/2380/1/T18599.pdf>.

Roussel, M. (1991). *Biographie legendaire d'Achille.* Amsterdam: Hakkert.

Rumpf, A. (1939). *Die Meerwesen auf den antiken Sarkophagreliefs.* Berlin: Grote.

Zanker, P., and Ewald, B. (2012). *The Imagery of Roman Sarcophagi.* Translated by J. Slater. Oxford: Oxford University Press.

Zissos, A. (2008). *Valerius Flaccus' Argonautica, Book 1.* Oxford: Oxford University Press.

Sitography

S.1

<http://ancient-greece.org/images/museums/eretria-mus/pages/eretria-003.html>

S.2

<http://www.beazley.ox.ac.uk/XDB/ASP/browse.asp?tableName=qryData&Browse
Session=99&start=0>

S.3

<https://www.iconiclimc.ch/visitors/treeshow.php?source=147&image_id
=39885&term=Cheiron>

S.4

<https://www.iconiclimc.ch/visitors/treeshow.php?source=147&image_id=37558&
term=Cheiron>

S.5

<https://www.iconiclimc.ch/visitors/treeshow.php?source=147&image_id=37544&
term=Cheiron>

S.6

<https://www.iconiclimc.ch/visitors/treeshow.php?source=
147&image_id=37545&term=Cheiron>

S.7

<http://www.britishmuseum.org/research/collection_online/collection_object_
details.aspx?objectId=434690&partId=1&people=97274&peoA=97274-1-7&page=1>

S.8

<http://www.pompeiiinpictures.com/pompeiiinpictures/R6/6%2007%2023%20p6.
htm>

S.9

<https://www.iconiclimc.ch/visitors/treeshow.php?source=147&image_id=39108&
term=Cheiron>

S.10

<https://www.iconiclimc.ch/visitors/treeshow.php?source=147&image_id=7262&
term=Cheiron>

S.11

<http://art.thewalters.org/detail/13447/gem-with-achilles-and-cheiron/>

S.12

<https://www.iconiclimc.ch/visitors/treeshow.php?source=147&image_id=30546&
   term=Cheiron>

S.13

<http://cartelen.louvre.fr/cartelen/visite?srv=obj_view_obj&objet=cartel_910_66023_
   TO110306.jpg_obj.html&flag=true>

S. 14

<https://upload.wikimedia.org/wikipedia/commons/8/81/Young_Centaur_Musei_
   Capitolini_MC656.jpg>

S.15

<https://en.wikipedia.org/wiki/Furietti_Centaurs#/media/File:Old_Centaur_Musei_
   Capitolini_MC658.jpg>

S.16

<http://pompeiiinpictures.com/pompeiiinpictures/rv/Villa%20Cicero%20p2.htm>

S.17

<https://www.iconiclimc.ch/visitors/treeshow.php?source=147&image_id=
   3916&term=Cheiron>

S.18

<http://ceres.mcu.es/pages/Viewer?accion=41&Museo=&AMuseo=MAN&Ninv=FD/
   P/04284&txt_id_imagen=1&txt_rotar=0&txt_contraste=0&txt_zoom=10&cabecera
   =N&viewName=visorZoom>

S.19

<https://upload.wikimedia.org/wikipedia/commons/0/0b/Berthouville_Centaur_
   skyphos_CdM_Paris_Cat60.jpg >

S.20

<https://upload.wikimedia.org/wikipedia/commons/7/7c/Paphos_Haus_des_Aion_-_
   Zug_des_Dionysos_2_Kentaur_und_M%C3%A4nade.jpg>

S.21

<http://www.sovraintendenzaroma.it/i_luoghi/roma_antica/monumenti/
   colombario_di_pomponio_hylas>

S.22

<http://www.britishmuseum.org/collectionimages/AN00975/AN00975819_001_l.jpg>

S.23

<https://commons.wikimedia.org/wiki/Category:Sarcophagus_from_via_Casilina_
   (Torraccia)>

BRILL

Music in the Time of Vergil
Insights from a Symposium

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Abstract

The twenty-eight papers delivered at a symposium entitled "Music in the Time of Vergil", sponsored by the Vergilian Society in June 2016, suggest a number of areas where promising research can continue to be done in the field of Roman music. These include the *Realien* of Roman music, the role of musical imagery in Latin poetry, Greek elements in Roman music, Roman attitudes to music and musical change, musical responses to political developments, and the influence of Rome on the music of the modern world.

Keywords

Introduction

In June 2016 the Vergilian Society hosted a symposium in Cuma, Italy, entitled "Music in the Time of Vergil".[1] The symposium was, to the best of my knowledge, the first international conference ever dedicated explicitly to the music of Augustan Rome.[2] Some papers from the symposium are in this issue of

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1   The symposium, organized by the author, was the 2016 iteration of the society's annual Symposium Cumanum, held each June in the Villa Vergiliana in cooperation with the Harry Wilks Study Center. For a brief report on the symposium, see Moore 2016b.

2   The author welcomes corrections of this statement by readers. The 2008 meeting of MOISA was dedicated to "Music of the Roman Empire." See *Philomusica on-line* 7.2 (2008: http://riviste.paviauniversitypress.it/index.php/phi/issue/view/07-02) and Rocconi 2010.

Greek and Roman Musical Studies; others have already appeared in the journal or will be published in future issues. Still others have been published or will be published in *Vergilius*, the journal of the Vergilian Society; in *Didaskalia*; and elsewhere. The conference and the publications resulting from it provide a good opportunity for taking stock of the state of research on music in Rome in general and Augustan Rome in particular.

1   The *Realien* of Roman Music

The study of Roman music has long had at its core examination of what our literary, epigraphical, and archaeological sources can tell us about just what kind of music was performed in Rome and by whom.[3] Several papers at the Cuma symposium revealed how this approach continues to bear fruit. Francesco Sirano examined how various pieces of inscriptional and archaeological evidence shed light on music and musicians in Augustan Rome ("Music to Cuma: Tradition and Actualization in the Age of Augustus, An Archaeological Updating"). Angeliki Liveri noted the striking similarities between the musical instruments, occasions, and practitioners alluded to in Vergil's *Aeneid* and archaeological evidence from the cities and villas buried by Vesuvius ("Musical Themes in the *Aeneid* of Vergil. Archeological Evidence in Campania during the Augustan Age").

Three papers concentrated on musical performers, using a range of different sources. Peter Kruschwitz reviewed inscriptional evidence for performers in late Republican and Augustan Rome, noting the great popularity of some performing artists, the existence of entertainers of both genders and of various ethnicities, and the performers' desire to keep their successes remembered through their epitaphs ("Remembering Augustan Performers"). Harry Morgan observed how the description of a dancer in the pseudo-Vergilian *Copa* reflects both literary influences and the realities of performance both in informal settings such as the *copa*'s tavern and on the contemporary stage ("Music, Sensuality and Stagecraft in the Pseudo-Vergilian *Copa*").[4] William A. Johnson approached from a new perspective what is probably the liveliest area of scholarship on Roman music: the study of pantomime.[5] Johnson proposed that Japanese theater in general, and in particular a recent play by Satoshi Miyagi

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3   See, for example, Fleischauer 1964; Wille 1967; Baudot 1973; Vendries 1999; Péché and Vendries 2001; Horsfall 2003; Melini 2008; Scoditti 2009; Castaldo 2012; Vincent 2016.

4   A version of this paper appeared in *GRMS* 5.1 (Morgan 2017).

5   See, for example, Garelli 2007; Hall and Wyles 2008; Webb 2008; Dunbabin 2016.

that combines elements of Nō and Bunraku, can shed light on why pantomime had such a powerful effect on Roman audiences of the Augustan Age and later. Like pantomime, Johnson noted, Miyagi's version of *Medea* features mythological subject matter, a distinction between actors who move and those who vocalize, gender reversals, elaborate costumes and masks, and emotive music and rhythm ("Pantomime and Satoshi Miyagi's *Medea*").[6]

Two papers evaluated what Augustan poetry can tell us about instruments and their use. Rodney Cross noted that while the shepherds of Vergil's *Eclogues* play almost exclusively the syrinx, Varro (*R.* 2.4.20) reveals that Roman shepherds also played regularly the *bucina*, a much louder 'brass' instrument. The world of real Italian shepherds and herdsmen, Cross suggests, would have been considerably louder than Vergil's bucolic fantasy ("*Musica rustica*: The Nature of Ancient Roman Pastoral Music"). Ian Goh found evidence for the *sistrum* and similar rattling brass instruments in Tibullus and other poets ("The Deadly Rattle of Delia (Tib. 1.3.24)").

One of the enduring controversies in the study of Roman music has been the question of how 'musical' Roman poetic performance was. What did Roman authors mean when they used words like *carmen* and *cano*, and how much Roman poetry was 'sung' in our sense of the word?[7] Kamila Wyslucha addressed these and related questions with respect to elegy, proposing that the Augustan poets created a fictionalized musical performance in describing presentation of elegy ("Musical Settings of Elegy as Depicted by the Augustan Poets"). In reviewing this question, she noted how the elegists altered the usual associations of the *tibia* and the *tuba*, and she has written for this issue of GRMS a piece entitled "Why is a Wedding *Tibia* Sadder than a Funeral *Tuba*?" (Wyslucha 2018).

2   Music and the Themes of Augustan Poetry

A second focus of the symposium was the degree to which Augustan poets used musical images to contribute to various themes in their poems. Drawing heavily on the new field of 'sound studies',[8] Lauren Curtis examined how in *Aeneid* 9 the sounds surrounding the mourning of Euryalus' mother, the taunts the Latin Numanus Remulus makes against the Trojans, and the death

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6   A version of Johnson's presentation has appeared in volume 13 of *Didaskalia* (Johnson 2016-2017).

7   See, for example, Habinek 2005; Lyons 2010; Wyslucha 2016.

8   For sound studies applied to Roman culture, see Melini 2007; Butler 2015; Vendries 2015, and the relevant chapters in Betts 2017.

of the citharode Cretheus underline the great challenge involved when a musician—or a poet like Vergil—seeks to bring order within the chaotic world of warfare ("War Music: The Acoustics of Trauma on Virgil's Italian Battlefield").[9] Julia Scarborough noted how, after indulging in much musical imagery in his *Eclogues*, Vergil used some of the same musical vocabulary in non-musical contexts in his later poems, suggesting that such imagery has been deliberately suppressed. The suppression of music, Scarborough argued, reflects with a sense of nostalgia the greater earnestness necessary in the worlds of the later poems ("Suppressed Musical Imagery in Virgil's *Georgics* and *Aeneid*"). Richard Tarrant reviewed the abundant musical imagery in Horace's love poetry ("The Food of Love: Music in Horace's Amatory Odes").

Some papers demonstrated how an awareness of musical imagery can contribute to one of the most important contemporary methods of reading Latin literature: intertextuality. Deborah Beck noted the near absence of similes related to music in the *Aeneid*, in contrast to the *Iliad* and the *Odyssey*. The rareness of such similes, she suggested, marks Vergil's determination to distinguish his poem from its predecessors ("The Dog that Didn't Bark: Musical Similes in Vergil's *Aeneid*").[10] Francesca Boldrer observed in Vergil's *Georgics* a considerably gloomier view of music than that presented in Lucretius' *De rerum natura* ("La musica nella poesia didascalica latina: da Lucrezio a Virgilio").

Other papers showed the subtle effects Augustan poets achieved through their portrayal of musicians. Timothy Power examined two citharodes described in Vergil's *Aeneid*: Iopas, who performs at Dido's banquet in book one, and Cretheus, who is slain by Turnus in book nine. Power expanded earlier arguments for an association between Iopas and King Juba of Mauretania, and he proposed that Turnus, in killing the musician Cretheus, shows himself isolated from music and the civilization it represents ("Vergil's Citharodes: Iopas and Cretheus Reconsidered").[11] Margaret Musgrove noted surprising similarities between two singers described in Ovid's *Metamorphoses*: the tragic Orpheus in book 10 and the comical Polyphemus, who sings to woo Galatea in book 13 ("Two Singers in Ovid's *Metamorphoses*").

Instruments also play important thematic roles in Augustan poetry. Lissa Crofton-Sleigh proposed that repeated reference to *tubae* and other 'brass' instruments in Vergil's *Aeneid* highlight both the destructiveness of war and war's

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9   A version of Curtis' paper will appear in *Vergilius* 63, retitled as "War Music: Soundscape and Sound in Vergil, *Aeneid* 9" (Curtis forthcoming 2017).

10   A version of Beck's paper appears in this issue of GRMS, retitled as "Music, Craft, and Technology in the Similes in Vergil's *Aeneid* (Beck 2018).

11   A version of Power's paper will appear in *Vergilius* 63 (Power forthcoming 2017).

necessity ("*Clamorque virum clangorque tubarum*: The Destructive Trumpet in Vergil's *Aeneid*"). April Spratley noted how the *tibia*, presented as a feature of refined living in earlier Augustan poetry, becomes in Ovid a symbol of violence and cruelty ("The Sound of Violence: The Transformation of the *Tibia* in Ovid's *Metamorphoses*").

3   Greece and Rome

A key question for those studying Roman music is just what the term 'Roman music' means. When so many known musicians were of Greek ethnicity and so many musical forms used by the Romans were versions of Greek forms, the inherent 'Greekness' of much Roman music must always be kept in mind, especially in a period as conspicuously Hellenizing as the reign of Augustus. Several papers examined the mixture of Greek and Roman in music of this period. In the symposium's keynote address, Andrew Barker discussed one of the first thinkers to ponder seriously just how 'Greek' Roman culture was: Dionysius of Halicarnassus, a near contemporary of Vergil. Dionysius' presentation of the music of early Rome, Barker observed, reflects his attempt to demonstrate that Rome was inherently a Greek city-state ("An Augustan Greek on Rome's Musical Past (and Present)").[12] Gary P. Vos observed how in portraying Linus in *Eclogue* 6, Vergil responded to the Greek tradition of the "Linus song" that went back to Homer (*Il.* 18.570). Vergil, Vos argued, could not have heard a version of the long-lost Linus song himself, but he knew from his Greek sources the technical details of the song, which he combined with allusions to satyr play, Plato's *Symposium*, and Theocritus ("Vergil's Linus (*Ecl.* 6.67): A Musical Genre's Swan Song?"). Two papers speculated on possible echoes of Greek and Anatolian traditions in Horace's *Odes*. Selina Stewart offered some suggestions about how Sappho's poetry was sung, and proposed that the same melodic features may have been evident in the performance of Horace's aeolic meters ("Sappho and Augustan Melody"). Samuel Holzman noted Horace's reference to his Lydian *tibiae* (*Carm.* 4.15.30) and asked whether Horace may have incorporated into his poetry features of Lydian music ("Horace's Lydian Remix: Anatolian Music Appropriation in the Age of Augustus").

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12   A version of Barker's paper, retitled as "Dionysius of Halicarnassus on Rome's Greek Musical Heritage," appeared in *GRMS* 5.1 (Barker 2017).

4   Music and Ideology

Also important in the study of Roman music have been the ways in which music and the portrayal of music reflected Romans' views of themselves and the world, including their attitudes towards music and different types of music. The Romans' varied and complex views on music and musical change are notoriously difficult to pin down in the face of contradictory evidence from Roman authors. Two papers at the symposium offered different ways of approaching these challenging questions. James Lloyd, examining Ovid's several versions of the Marsyas story, proposed that Ovid viewed the history of Roman music as a decline from bucolic simplicity to dangerous urban sophistication ("Marsyas in the Time of Vergil: Shifting Views of Rome's Musical Past"). Any account of Augustan attitudes to music must take into consideration the views expressed by Philodemus in his *De Musica*, which influenced the musical views of Vergil and others (cf. Delattre 2004). In the Cuma symposium Philodemus appeared in an unusual context. Ferdinand Stürner proposed that in his portrayal of Teuthras, a singer who entertains Hannibal in book 11 of the *Punica*, Silius Italicus incorporated the musical theory proposed by Philodemus and adopted by the Augustans ("The Songs of Teuthras in Silius Italicus: Augustan Musical Theory in Post-Augustan Epic?").

Music and the portrayal of music, like all aspects of the Augustan Age, responded to the tumultuous political changes of the first century BCE, especially the beginning of the principate. Several papers at the conference addressed this aspect of Roman musical history, two in particular. Daniela Castaldo argued that the musicians and musical instruments presented in Augustan private art, especially drinking vessels made of *terra sigillata*, responded to Augustus' propaganda in the importance they assigned to Apollo and in other features, but were in other respects indifferent to the official program encouraged in public art ("Musical Themes in Decorations of Private Art During the Augustan Age").[13] Kevin Moch proposed that the singers of Vergil's *Eclogues* compete with greater intensity than do their predecessors in Theocritus' *Idylls*. The marked increase in competition, Moch suggested, reflects the competition for land Vergil and his contemporaries experienced as Augustus and other warlords took land from Italian farmers and distributed it to their veterans ("*Certamen Magnum*: Rethinking the Role of Competitive Song in Vergil's *Eclogues*").[14]

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13   A version of Castaldo's paper appears in this issue of GRMS, retitled as "Musical Themes and Private Art in the Augustan Age" (Castaldo 2018).

14   A version of Moch's paper will appear in *Vergilius* 63 (Moch forthcoming 2017).

5   **Influences and Echoes**

Rome has had a profound effect on various modern musical genres.[15] Three papers at the symposium discussed modern musical responses to Augustan culture. After reviewing evidence for folk music in the *Idylls* of Theocritus and Vergil's *Eclogues*, Eleonora Rocconi introduced those at the symposium to the *contrasti* between poets in *octava rima*, a sophisticated tradition of improvised competitive bucolic song in modern Italy that is both analogous to Vergil's shepherd musicians and influenced by Vergil and other literary works ("Singing Contests in Vergil's *Eclogae*: Folk Music and Literary Conventions"). Philip Barnes discussed how, in 1974, Brazilian composer José Antônio de Almeida Prado set Vergil's fourth *Eclogue* to music. In incorporating Vergil's promise of a golden age, Almeida Prado expressed his hope for an end to the repressive military government controlling Brazil at the time ("The *Eclogues* in Brazil: Singing an 'Oráculo' for the New Republic"). Maria Venuso reported how in 1989 choreographer Mark Morris channeled Vergil through Purcell to comment through dance on gender, *AIDS*, and other issues ("Dancing Vergil Today: Mark Morris Rewrites Dido's Drama").

        Conclusions

The papers of the Cuma symposium did not, of course, cover every aspect of Roman, or even Augustan, music. Little was said at the gathering, for example, about the role of music in Roman religion, an area that has gained much scholarly interest.[16] The Augustan focus of the symposium meant that scholarship on music from earlier and later periods of Rome was by necessity excluded. One thinks, for example, of work on the music of Republican theater[17] and of late antiquity.[18] Nevertheless, the papers reflect a broad range of approaches that students of Roman music will want to continue to follow. There remains much to be learned about the *Realien* of Roman music. We have only scratched the surface of what can be learned about the aims and methods of Latin authors by examining closely the musical worlds they create. The complex mix of Greek and Roman in the musical life of Rome needs a great deal more attention. More study of the interplay between Roman music and ideology—both

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15   See, for example, Ketterer 2009; Manuwald 2013; Alonso Fernández 2017.

16   See, for example, Quasten 1973 and the relevant essays in Brulé and Vendries 2001.

17   See, for example, Marshall 2006; Moore 2012 and 2016a.

18   E.g. Cosgrove 2006; Webb 2013; Pöhlmann 2017.

attitudes to music and its development and musical responses to historical and political changes—promises great rewards. And the influence of Rome on music in the modern world can be pursued in numerous new directions. The Cuma symposium bodes well for the study of Roman music in the coming years.

Bibliography

Alonso Fernández, Z. (2017). Epic in Motion: *La Didone* by Salvatore Viganò and Virgil's *Aeneid* 1-4. *Classical Receptions Journal* 9, pp. 400-25. DOI: 10.1093/crj/clw021

Barker, A. (2017). Dionysius of Halicarnassus on Rome's Greek Musical Heritage. *Greek and Roman Musical Studies* 5, pp. 63-81. DOI: 10.1163/22129758-12341290

Baudot, A. (1973). *Musiciens romains de l'antiquité*. Montreal: Les Presses de l'Université de Montréal.

Beck, D. (2018). Music, Craft, and Technology in the Similes in Vergil's *Aeneid*. *Greek and Roman Musical Studies* 6, pp. 61-78. DOI: 10.1163/22129758-12341312

Betts, E., ed. (2017). *Senses of the Empire: Multisensory Approaches to Roman Culture*. New York: Routledge.

Brulé, P., and Vendries, C. (2001). *Chanter les dieux: Musique et religion dans l'Antiquité grecque et romaine*. Rennes: Presses Universitaires de Rennes.

Butler, S. (2015). *The Ancient Phonograph*. New York: Zone Books.

Castaldo, D. (2012). *Musiche dell'Italia antica: Introduzione all'archeologia musicale*. Bologna: Ante Quem.

Castaldo, D. (2018). Musical Themes and Private Art in the Augustan Age. *Greek and Roman Musical Studies* 6, pp. 96-114. DOI: 10.1163/22129758-12341314

Cosgrove, C.H. (2006). Clement of Alexandria and Early Christian Music. *JECS* 14, pp. 255-82. DOI: 10.1353/earl.2006.0049

Curtis, L. (forthcoming 2017). War Music: Soundscape and Song in Vergil, *Aeneid* 9. *Vergilius* 63.

Delattre, D. (2004). Vergil and Music, in Diogenes of Babylon and Philodemus. In: D. Armstrong et al., eds, *Vergil, Philodemus, and the Augustans*. Austin: University of Texas Press, pp. 245-63.

Dunbabin, K.M.D. (2016). *Theater and Spectacle in the Art of the Roman Empire*. Ithaca, NY: Cornell University Press.

Fleischauer, G. (1964). *Etrurien und Rom*. Leipzig: Deutscher Verlag für Musik.

Garelli, M.-H. (2007). *Danser le mythe: La pantomime et sa réception dans la culture antique*. Louvain: Peeters.

Habinek, T. (2005). *The World of Roman Song: From Ritualized Speech to Social Order*. Baltimore: Johns Hopkins University Press.

Hall, E. and Wyles, R., eds (2008). *New Directions in Ancient Pantomime*. Oxford: Oxford University Press.

Horsfall, N. (2003). *The Culture of the Roman* Plebs. London: Duckworth.

Johnson, W.A. (2016-2017). Imperial Pantomime and Satoshi Miyagi's *Medea. Didaskalia* 13, pp. 76-90 (didaskalia.net/issues/13/13/).

Ketterer, R.C. (2009). *Ancient Rome in Early Opera*. Urbana: University of Illinois Press.

Lyons, S. (2010). *Music in the Odes of Horace*. Oxford: Aris & Phillips.

Marshall, C.W. (2006). *The Stagecraft and Performance of Roman Comedy*. Cambridge: Cambridge University Press.

Manuwald, G. (2013). *Nero in Opera: Librettos as Transformations of Ancient Sources*. Berlin: de Gruyter.

Melini, R. (2007). *Archeologia musicale: Per uno studio sull'orizzonte sonoro degli antichi romani*. Trento: UNI Service.

Melini, R. (2008). *Suoni sotto la cenere: La musica nell'antica area vesuviana*. Pompei: Flavius.

Moch, K.E. (forthcoming 2017). *Certamen Magnum*: Competition and Song Exchange in Vergil's *Eclogues. Vergilius* 63.

Moore, T.J. (2012). *Music in Roman Comedy*. Cambridge: Cambridge University Press.

Moore, T.J. (2016a). Music in Roman Tragedy. In: S. Frangoulidis, S.J. Harrison, and G. Manuwald, eds, *Roman Drama and its Contexts*, Berlin: de Gruyter, pp. 345-61.

Moore, T.J. (2016b). Music in the Time of Vergil: Symposium Cumanum, 21-24 June 2016. *Vergilius* 62, pp. 167-9.

Morgan, H. (2017). Music, Sexuality and Stagecraft in the Pseudo-Vergilian *Copa. Greek and Roman Musical Studies* 5, pp. 82-103. DOI: 10.1163/22129758-12341291

Péché, V., and Vendries, C. (2001). *Musique et spectacles à Rome antique et dans l'Occident romain sous la République et le Haut-empire*. Paris: Errance.

Pöhlmann, E. (2017). Ambrosian Hymns: Evidence for Roman Music of Late Antiquity? *Greek and Roman Musical Studies* 5, pp. 104-22. DOI: 10.1163/22129758-12341292

Power, T. (forthcoming 2017). Vergil's Citharodes: Cretheus and Iopas Reconsidered. *Vergilius* 63.

Quasten, J. (1973). *Musik und Gesang in den Kulten der heidnischen Antike und christlichen Frühzeit*. 2nd ed. Munster: Aschendorff.

Rocconi, E., ed. (2010). *La musica nell'Impero Romano. Testimonianze teoriche e scoperte archeologiche.* Pavia: Pavia University Press.

Scoditti, F. (2009). *Solisti ed esecutori nella cultura musicale romana*. Galatina: Congedo.

Vendries, C. (1999). *Instruments à cordes et musiciens dans l'Empire romain. Étude historique et archéologique (IIe siècle av. J.-C.-Ve siècle ap. J.-C.)*. Paris: L'Harmattan.

Vendries, C. (2015). Du bruit dans la cité. L'invention du « paysage sonore » et l'Antiquité romaine. In: S. Emerit, S. Perrot, and A. Vincent, eds, *Le paysage sonore de*

l'Antiquité: Méthodologie, historiographie et perspectives, Le Caire: Institut français d'archéologie orientale, pp. 209-58.

Vincent, A. (2016). *Jouer pour la cité: une histoire sociale et politique des musiciens professionnels de l'Occident romain*. Rome: École Française de Rome.

Webb, R. (2008). *Demons and Dancers: Performance in Late Antiquity*. Cambridge, MA: Harvard University Press.

Webb, R. (2013). Professional Musicians in Late Antiquity. In: S. Emerit, ed., *Le statut du musician dans la Méditerranée ancienne: Égypte, Mésopotamie, Grèce, Rome*, Le Caire: Institut Français d'Archéologie Orientale, pp. 279-96.

Wille, G. (1967). *Musica Romana. Die Bedeutung der Musik im Leben der Römer*. Amsterdam: P. Schippers.

Wyslucha, K. (2016). *Cano* versus *lego*: A Characteristic of Some Augustan Poetic Genres in Connection to the Manner of Their Performance. In: L. Bravi, L. Lomiento, A. Meriani, and G. Pace, eds, *Tra* lyra *e* aulos*: tradizioni musicali e generi poetici*, Pisa: Fabrizio Serra, pp. 119-37.

Wyslucha, K. (2018). Why is a Wedding *Tibia* Sadder than a Funeral *Tuba*? *Greek and Roman Musical Studies* 6, pp. 79-95. DOI: 10.1163/22129758-12341313

BRILL

Music, Craft, and Technology in the Similes in Vergil's *Aeneid*

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Abstract

Human beings in epic similes often rely on forms of specialized expertise to make new things and to create order in the world around them. The ways that the similes in a given epic poem represent craft and technology convey fundamental points about the larger world view of that poem in relation to human beings and the contours of epic poetry. A simile featuring a singer or poet in particular invites the audience of a poem to draw parallels between the musical simile and the epic poem in which it appears. The single musical simile in the *Aeneid,* 7.699-702, creates a portrait of the limits of human agency, the nature of group identity and musical performance, and the qualities of the *Aeneid* as an epic poem. The themes and modes of presentation in this simile are characteristic of the 'song' that Vergil has created with his own *Aeneid*.

Keywords

Human beings in epic similes often rely on specialized, learned expertise to make new things and to create order in the world around them. Such endeavors include craft such as metalworking or shipbuilding, in which expertise allows the technician to make an artifact or work of art; and technical skills such as seafaring and agriculture, which entail a learned skill that leads to something other than creating a physical object.[1] A simile perforce draws attention

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1 Technology forms one of three major categories of simile subjects in the taxonomy of Rood (2008), following Edwards (1991, 35, with bibliography). This article does not discuss

to itself and arouses in a poem's audience "a strong need to interpret" (Fowler 1991, 27, on ecphrasis, whose points of commonality with similes are discussed in Lonsdale 1990), insofar as the narrative puts the main story on hold for a moment in order to depict a superficially unrelated scene. This "need to interpret" raises a number of questions for the audience of an epic poem: how does the simile relate to the adjacent story? how does it compare to similes elsewhere in the same poem—or in other poems that the audience might know—that depict comparable scenes? what might the simile convey about the narrator of the poem? Similes about craftsmanship in particular direct some of this interpretive impulse toward the poem itself, because both the simile and the poem feature a skilled creator at the helm.

Indeed, the specific ways that the similes in a given epic poem represent craft and technology convey fundamental points about the larger world view of that poem. Song displays the same basic qualities as other forms of craft and technology that appear in epic similes. In the *Odyssey*, Eumaeus states that singers share the possession of a complex, prestigious, learned expertise with doctors, builders, and seers (17.383-5, discussed in detail by Steiner 2010, 127f.). Moreover, singers, like metalworkers and other human experts, have divine teachers (*Od.* 6.232-4 = 23.159-61; see further Lonsdale 1990, 12). Music both resembles other forms of craft and technology that appear in epic similes and has unique features arising from the inherently self-referential nature of similes about song, in that the creator in the simile and the narrator of the poem are engaged in the same kind of activity. Thus, a simile featuring a singer or poet invites the audience of a poem to draw parallels between the musical simile and the epic poem in which it appears. The single musical simile in the *Aeneid*, 7.699-702, which will be the focus of the second half of this paper, draws a subtle and far-reaching portrait of the limits of human agency, the nature of group identity and musical performance, and the qualities of the *Aeneid* as an epic poem. As Vergil's simile achieves this effect largely through intertextual allusions to and contrasts with earlier epic poetry (primarily the Homeric epics and Apollonius, but also Ennius), the first half of the paper is devoted to sketching out the approaches of various Greek epics to technological similes, focusing in particular on any comparisons that feature human musicians.

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agriculture, because the expertise it requires is much more routine and widespread than the specialized technological know-how that appears in other kinds of craft similes.

1   Craft and Song in Similes of Surviving Greek Epic before the *Aeneid*

In the craft similes in the *Iliad*, danger and destruction are common, and the ways that human beings in similes deal with the challenges they face encapsulate some of the poem's basic attitudes about the human condition. Just over 10% of the extended similes in the *Iliad* feature a scene involving human craft or technology (20 of 185 similes).[2] The most frequently attested non-agricultural technological activity in the similes in the *Iliad*—seafaring, with five occurrences—always features the sailors as passive observers or reactors to forces in the natural world. Even when sailors beset by bad weather do survive (15.624-8; τυτθὸν γὰρ ὑπὲκ θανάτοιο φέρονται, 628), we never learn how they escaped death.[3] Certainly, their own actions do not seem to have been the reason: the simile focuses mainly on the ship and the weather (624-7), whereas the sailors are only shown in fear of the terrible onslaught of the wind and sea (τρομέουσι … δειδιότες, 627f.).

Other crafts in *Iliad* similes entail destruction for the necessary raw materials, as when woodcutters fell a tree. Most of these similes mention the reason for cutting the tree down, generally to build a ship (e.g. 16.482-4) but occasionally something else (4.482-7, a chariot). In this way, the dead tree becomes an investment in human civilization and culture rather than simply a grievous loss of a noble living thing (Rood 2008).[4] At times, human craft workers in the similes of the *Iliad* can and do ward off adverse natural forces (such as the builder of a strong wall for keeping out the wind, 16.212f.) or create beautiful objects (most memorably the dyed ivory cheekpiece desired by all who see it, 4.141-5). But in many scenarios, even the expertise of human technology cannot overcome the natural forces of bad weather, fear, and death.

The *Odyssey* has a very different outlook on almost every level. With many fewer extended similes than the *Iliad* (35), the *Odyssey* has a much higher proportion of similes that involve craft (8, or 23% of the total). The particular

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2   Edwards (1991, 24) notes the range of totals for Homeric similes given by various scholars, depending on what definition of a simile is used. Ready (2008) provides a detailed survey of what constitutes a 'simile' in Homeric epic.

3   Other seafaring similes: 4.75-7 (a star that is a τέρας for sailors), 7.4-6 (a god brings a favorable wind to sailors tired from rowing), 15.381-3 (a wave goes over the side of a ship), 19.375-8 (sailors at sea observe a fire in a sheep steading in the mountains).

4   The article argues that these similes make the deaths of warriors so described "beautiful" and "essentially positive" (20 and *passim*), but in my view, such craft similes only make death in battle bearable, by implying that it is not meaningless.

kinds of craft in the similes of the *Odyssey* overlap with, but are not identical to, those found in the *Iliad*. Both poems describe seafaring and ship-building, but the *Odyssey* lacks several kinds of craft found in the *Iliad* (building, textiles, and pottery) and mentions two others that are not found in the longer Homeric epic (metalwork and song). Moreover, the human beings featured in the craft similes in the *Odyssey* are consistently more in control of their environment than their fellows in the *Iliad*. The one simile in the *Odyssey* (23.233-8) that depicts seafaring makes an instructive contrast with the sailors in the *Iliad*.

> ὡς δ' ὅτ' ἂν ἀσπάσιος γῆ νηχομένοισι φανήη,
> ὧν τε Ποσειδάων εὐεργέα νῆ' ἐνὶ πόντῳ
> ῥαίσῃ, ἐπειγομένην ἀνέμῳ καὶ κύματι πηγῷ·   235
> παῦροι δ' ἐξέφυγον πολιῆς ἁλὸς ἤπειρόνδε
> νηχόμενοι, πολλὴ δὲ περὶ χροΐ τέτροφεν ἅλμη,
> ἀσπάσιοι δ' ἐπέβαν γαίης, κακότητα φυγόντες·

> As when land appears, a glad sight to swimming men
> whose well-made ship Poseidon wrecks at sea
> as it is buffeted by wind and mighty swell.
> A few men escape to land from the grey sea
> by swimming, and a thick salty crust encrusts their flesh.
> Gladly they clamber onto dry land, after escaping destruction.[5]

Like many sailors in the *Iliad*, the people in this simile have suffered from difficulties at sea in which the gods play a role (234f.), and many have lost their lives (παῦροι δ' ἐξέφυγον, 236). But the simile devotes more attention to the actions of the sailors who swim to safety (233, 236-8) than it does to how they got into trouble in the first place. This more positive outlook extends to similes about making things: whereas the most common raw material in craft similes in the *Iliad* is wood, which entails the death of a living being, the most common craft scenario in similes in the *Odyssey* features metal, an inanimate substance whose transformation into an artifact requires no loss of life (6.232-4 = 23.159-61, 9.391-3).

These differences in the specifics of craft scenarios may at first glance appear trivial, but in fact, they embody key aspects of the different outlooks of the two Homeric epics. The *Iliad* sees human beings as valiant and skilled, but

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5   Homeric passages are taken from the OCTs of Monro and Allen. The translations, which have sacrificed felicity almost entirely upon the altar of accuracy, are my own.

generally outmatched by the forces arrayed against them. As we have seen, this view pervades the craft similes, where sailors are mainly depicted as spectators and victims of stronger natural forces, and where the creative forces of human craftsmanship are entwined with death. Only one craft simile in the *Iliad* mentions the gods as teachers of craft expertise: 15.411f. attributes the knowledge of a shipbuilder to Athena (τέκτονος … δαήμονος, ὅς ῥά τε πάσης / εὖ εἰδῇ σοφίης ὑποθημοσύνῃσιν Ἀθήνης). The other nineteen craft similes show no interest in how people learn technological skills, depicting craft as a purely human endeavor rather than a way in which the gods may help and cooperate with human beings. This sense of admirable but insufficient human strength is also characteristic of Achilles and Hector, both of whom show impressive valor that does not ward off an early and lamentable death.

In the *Odyssey*, in contrast, the ability of human beings to shape their environment—or at least, the main hero's ability to do so—is a key theme of the poem. This theme is depicted partly by means of a high proportion of similes featuring craft, an endeavor in which human beings use their skills to govern and arrange their surroundings, but also through the specific details of the scenarios in its craft similes. In the main story, Odysseus' return home hinges in large part on his ability to control both himself and various aspects of his environment.[6] The help of Athena also plays a key role in the story, a notion reflected in the craft similes, three of which (nearly half) mention the gods as teachers of human technological skills. All of the craft similes in the *Odyssey* depict Odysseus making progress towards his return home, either with Athena's assistance (6.232-4 = 23.159-61) or as a result of his own contrivances.[7] Thus, the presentation of craft in Homeric similes

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6 Odysseus' capacity to withstand mistreatment and stick to his own goals, and his skill at telling lies and manipulate others, are essentially two sides of the same heroic coin (cf. Cook 1999, focusing mainly on ideas of heroism): both depend on an ability not to take one's circumstances at face value, but instead to put one's own interpretation upon them and persuade others to accept that interpretation. All of Odysseus' most prominent traditional epithets (πολύμητις, πολύτλας, πολύτροπος) highlight this feature of his personality. See also Rutherford 1986, on how Odysseus' basic personality traits develop over the course of the poem.

7 Preparing the stake with which to blind the Cyclops (compared to shipbuilding, 9.384-6); what happens to the Cyclops' eye (metalworking, 9.391-3); Odysseus lies awake on Ithaca considering his options (a man cooking a blood pudding, 20.25-7); the reunion of Penelope and Odysseus (23.233-8). The two song similes for Odysseus (17.518-20 and 21.406-8) will be discussed below.

simultaneously reflects and puts forward two different world views in the *Iliad* compared to the *Odyssey*.

   Song appears in two craft similes that describe Odysseus, highlighting two distinguishing features of his character that contribute to his safe return home. These similes depict the ἀοιδός as a knowledgeable technician who has mastered various skills that enable him to succeed in his craft (Ready 2010, 153f., citing Finkelberg 1998): he can sing a song that appeals to his listeners (17.518-20) and he can keep his lyre in good working order (21.406-8). Both similes describe the singer as "knowledgeable" (θεῶν ἒξ ... δεδαώς, 17.518f.; ἐπιστάμενος, 21.406) and both dwell on the positive response of the object of the singer's attentions. The audience of a song hangs on the alluring words of the singer (ἔπε᾿ ἱμερόεντα βροτοῖσι / τοῦ [sc. ἀοιδοῦ] δ᾿ ἄμοτον μεμάασιν ἀκουέμεν, 17.519f.) and the lyre being restrung yields easily to the singer's ministrations (ῥηϊδίως, 407). These similes depict Odysseus as both proficient and knowledgeable in two very different skills that pave the way for his return home. He often gains the sympathy and help of others with his ability to tell stories that connect with his listeners, not only Eumaeus and Penelope (the speaker and addressee of the simile in Book 17) but also the Phaeacians, whose king Alcinous compares Odysseus to a knowledgeable bard during the course of Odysseus' long tale of his own adventures after the fall of Troy (μῦθον δ᾿ ὡς ὅτ᾿ ἀοιδὸς ἐπισταμένως κατέλεξας, 11.368). But Odysseus can also exert physical strength and skill when he needs to, and the lyre simile at the end of Book 21 presages the pitched battle against the suitors in Book 22 that he wins, thanks in part to the presence of Athena. A wide range of qualities that define Odysseus and the epic that tells his story are captured by similes that compare him to a bard.

   Apollonius' *Argonautica*, the only surviving epic poem composed between the Homeric epics and the *Aeneid*, essentially steers a path between the quite different courses charted by the craft similes in the *Iliad* versus the *Odyssey*. 16% of its similes depict a craft-related scene (13 of 79), which falls midway between the proportions in the *Iliad* (11%) and the *Odyssey* (23%). The particular types of craft in the similes in the *Argonautica* include two that appear in both Homeric epics (seafaring and shipbuilding), two found only in the *Iliad* (building and textiles) and two found only in the *Odyssey* (metalwork and song). The only simile that depicts a human being making music, a piping shepherd juxtaposed with fish disporting themselves in the wake of the Argo as Orpheus plays his lyre on board, captures the ethos of both the story world of the *Argonautica* and the poem's ideas about poets and poetry (1.572-9).

<div align="center">τοὶ δὲ βαθείης</div>

ἰχθύες ἀίσσοντες ὕπερθ' ἁλός, ἄμμιγα παύροις
ἄπλετοι, ὑγρὰ κέλευθα διασκαίροντες ἕποντο.
ὡς δ' ὁπότ' ἀγραύλοιο κατ' ἴχνια σημαντῆρος   575
μυρία μῆλ' ἐφέπονται ἅδην κεκορημένα ποίης
εἰς αὖλιν, ὁ δέ τ' εἶσι πάρος σύριγγι λιγείῃ
καλὰ μελιζόμενος νόμιον μέλος· ὣς ἄρα τοί γε
ὡμάρτευν.[8]

<div align="center">And the fish</div>

leaping above the deep seas, large mixed with small,
followed, frisking along the watery pathways.
As when, in the footsteps of a rustic shepherd
the bountiful flocks, abundantly sated on grass,
follow along to their fold, while he goes in front,
beautifully playing a bucolic melody on his clear-sounding pipes,
so indeed did the fish keep pace with the ship.

This simile brings together herding and craft, two areas of human endeavor that regularly appear in similes. The shepherd demonstrates forms of expertise and human mastery in many dimensions at once. He is sufficiently in control of the safety of his animal charges that he is walking in front of them—rather than in the rear, as would be necessary if the herd were acting anxious or disobedient[9]—and playing music. Unusually, no predators or other threats to the animals are mentioned. The well-being of his flock enables the shepherd to practice his musical craft, described in detail at 1.577f. In musical similes in the *Odyssey*, a bard is shown either connecting with an animate audience (as at 17.518-20) or interacting with his musical instrument (21.406-408); the rustic musician in this simile is succeeding in both of these aspects of his craft at the same time.

The differences between this shepherd's music and the music of the bards mentioned in musical similes in the *Odyssey* parallel, and indeed help to depict, differences between the contours of the *Odyssey* and the *Argonautica* as epic poems. The *Odyssey* is keenly interested in the process of performing, listening to, and interpreting epic poetry, as it shows through its many detailed scenes of characters telling stories. Such scenes feature both professional bards, such as Phemius and Demodocus, and characters, including but not limited to

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8   Apollonius quotations are taken from Race 2008.
9   I am grateful to Ruth Scodel for this insight into flock management strategy.

Odysseus.[10] The music similes in the *Odyssey* bolster this theme by describing a poet performing the same kind of poetry that the *Odyssey* regularly depicts in the main story. Indeed, the representation of bardic performance on multiple narrative levels, including Demodocus' songs and the bards in similes, help to make this a central theme of the poem.

The *Argonautica*, on the other hand, envisions epic poetry as a melding of many different genres of poetry, including Homeric epic but also contemporary non-epic genres, such as the bucolic ideal that this simile depicts. The language in this simile—such as νόμιος "related to shepherds" and the rustic pipe σύριγξ—brings to mind the bucolic poetry of Theocritus (cf. Ardizzoni 1967, *ad loc.*), a contemporary of Apollonius who depicts musicians performing in just such rural landscapes as this shepherd inhabits. At the same time, the simile's vocabulary sharply distinguishes the activity of this shepherd not only from the bardic performances that play a central role in the *Odyssey*, but from the ways that Homeric poetry represents human musicians. νόμιος does not appear in Homeric epic; σύριγξ appears just twice;[11] and while μελίζω is found in various poetic genres that are not written in hexameters, and in the bucolic hexameters of Theocritus, this is its only appearance in non-bucolic hexameter poetry. Such language not only gives freshness and vigor to the image of the shepherd, but it sounds a clear note of bucolic poetry within the epic genre.

The post-Homeric "song" word μέλος (1.578) does not have such specific generic associations. It appears just three times in the *Argonautica*, where it is used for three starkly different kinds of musical activity. In addition to this shepherd's song, μέλος refers to the song of Orpheus (4.907) and the singing swans in a simile describing the laments of the maidens accompanying Medea (4.1301), when they think they are about to die in the Libyan desert. The use of μέλος in the *Argonautica* suggests that while the shepherd may appear to be simply entertaining himself and his flock, he is in fact engaged in an activity of some musical stature, in that the other practitioners of μέλος are Orpheus himself and swans singing at their own death, which had become proverbial by the third century BCE (Arnott 1977, 149).

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10   de Jong (2001, 191f.) offers a manageable overview of the enormous bibliography on singers and the *Odyssey*. Mackie (1997) is particularly helpful on the relationship between storytelling and song.

11   Both times in the *Iliad*: Agamemnon hears the Trojans making music (10.13), and the shield of Achilles includes shepherds who play the σύριγξ (18.526).

2   Similes of Craft and Music in the *Aeneid*

Music appears—or does not appear—in the surviving epic poems preceding the *Aeneid* in different ways that harmonize with both the simile world and the general outlook of each poem as a whole. The *Iliad* does not depict any scenes of human musicianship, consistent with the sense that emerges from all areas of the poem that the exercise of human skill has a limited impact on what happens in the world around us. Ineffective or futile song, analogous to the sailors who are never seen actively sailing their own ships in the seafaring similes in the *Iliad*, would appear to be essentially a contradiction in terms, not to mention a poor advertisement for the performer of the *Iliad*. In the *Odyssey*, on the other hand, human musicians—and Odysseus himself—stand out for their ability to shape various aspects of their environment in the course of plying their craft, and for their close relations with the gods who teach them what they know. The bardic similes in the *Odyssey* help to make narrative and poetry one of the main interests of the poem. Finally, the proportion and the content of the craft similes in the *Argonautica* evoke a combination of both Homeric poems, and the calm shepherd serenading his replete flock in the poem's only simile of human song conveys the distinctive outlook of the *Argonautica*. This comprises both an optimistic view of the power of human craft and expertise, and also a conception of epic poetry that incorporates many kinds of poetry within it, including both Homeric epics and various literary genres from many different time periods, including Apollonius' own day.

   The craft similes in the *Aeneid* depict human agency as even less potent than the *Iliad* does, a gloomy view that also characterizes the *Aeneid* as a whole. Where the *Iliad* sees mortals as brave and skillful beings who generally fail to conquer the superior forces of nature, conflict, and death despite their own considerable strengths, the *Aeneid* has grave doubts that human beings can exert any meaningful effect on the world around them. As in the *Iliad*, this world view emerges from many different features of the *Aeneid*, including its craft similes. The *Aeneid* has a slightly lower proportion of craft similes than the *Iliad* (almost 10%, 10 of 103), and a much lower proportion of craft *workers*, since six of these craft similes feature only an artifact without mentioning the person who made it.[12] This moves the focus of craft similes away from the human creator's relationship with his raw materials or his environment (including his teachers), and thus diminishes the extent to which craft similes

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[12]   For example, the inlaid ceiling and bronze vessels that reflect the light of the sun in the simile at *Aeneid* 8.22-5 must have been made by skilled craftsmen, but its creators do not figure in this human-free scene.

in the *Aeneid* bring out the skills and power of the human craftsman. For a
reader aware of the very different patterns in the craft similes in surviving pre-
Vergilian Greek epic, where just four of the 41 craft similes in Homeric epic and
Apollonius lack a human artisan, the contrast with earlier epic similes creates
an empty gap where the human creator should be.

Human beings in the *Aeneid*, in many kinds of similes and in the main story,
are consistently depicted as peripheral, ineffectual, and marginalized as they
interact with the world around them. Often—as with the subject matter of
craft similes—Vergil achieves this effect partly by drawing a contrast between
literary antecedents in which human beings play a strong and active role,
and similar scenes in the *Aeneid* in which the human actor is either power-
less to affect his environment or entirely absent. When Vergil uses allusion in
this way to juxtapose human absence or failure with its opposite, the limita-
tions of human agency in the *Aeneid* cannot be accepted as an unremarkable
norm, but instead become a source of keen regret. These allusions remind the
audience that in the similes of the *Odyssey*, or the *Argonautica*—but not the
Aeneid—song can offer humans not just power and control, but also comfort
and pleasure.

An analogous gap appears in the topics of the various craft similes in the
Aeneid. They cover the same range of activities as those in the *Argonautica*—
building, metalwork, seafaring, woodworking, and textiles—with the exception
of human song.[13] This contrast highlights the absence of human musicianship
from the kinds of craft found in the similes in the *Aeneid*. The *Aeneid* does
have one simile with the dense concentration of musical vocabulary that we
have seen in similes in Greek epic depicting human beings engaged in musical
activities (identified in bold in the passage below), but the singers are swans
rather than humans.

> ibant aequati **numero** regemque **canebant**:
> ceu quondam niuei liquida inter nubila cycni
> cum sese e pastu referunt et longa **canoros**
> dant per colla **modos**, sonat amnis et Asia longe
> pulsa palus (*Aeneid* 7.698-702).[14]

> They were marching evenly to a **beat**/in **ranks** and **serenading** their king,
> as sometimes among the flowing clouds snowy swans

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13   Two *Aeneid* similes mention *choros* in the context of worshiping the gods (Diana, 1.499;
      Apollo, 4.145), but no musical details at all are provided and this must be a different activ-
      ity from the individual singers found in similes in the *Odyssey* and the *Argonautica*.
14   The text of the *Aeneid* is Mynors' OCT.

> return from pasture and render **songful melody**
> through their long necks, and far and wide the stream and
> the Asian swamp resound.

This swan simile embodies key features of both the mythological story world and the *Aeneid*'s perspectives on epic poetry, often through contrasts with swan similes in *Iliad* 2 and *Argonautica* 4. Vergil's swans, unlike the chaotic flocks depicted in *Iliad* 2, act as a single unified group, a difference that brings forward the theme of group identity and cohesion. The swans in *Argonautica* 4, meanwhile, share a funeral setting with the adjacent story. This feature of the *Argonautica* simile poses questions for the audience of the *Aeneid* about whether death may also await the Italian troops being likened to swans, and more broadly about the extent to which human beings can understand the relationship between their own actions and their destiny. The concentration of musical vocabulary in the *Aeneid* simile characterizes the swans' song as music, not simply as melodic or pleasant to the ear, thus encouraging the audience to draw additional parallels between these swans and similes of human musicianship in earlier Greek epics. Indeed, the density of this simile—in its musical vocabulary, its many-layered intertextual allusions, and the range of interpretations that it encourages—typifies the style of composition and interpretation that pervades the *Aeneid* as a whole.

In the simile, the swans produce *canoros ... modos* (7.700f.), which are musical sounds whose specific characteristics cannot be exactly determined. *Canorus* in the *Aeneid* also refers to the sound of a bronze war trumpet (9.503) and, in Aeneas' speech to the Sibyl in the Underworld, to Orpheus' lyre (*fidibusque canoris*, 6.120), which Aeneas mentions because it had the power to recall Eurydice from the dead. The points in common among these three uses of *canorus* in the *Aeneid* suggest that it describes a carrying, non-verbal melody with a concrete effect on the world around it: the lyre leads a dead woman out of the underworld, the war trumpet gives the signal to begin a battle. The quality common to the different *canorus* sounds lies in their effect on the world around them rather than on their specific musical properties. Moreover, *modus* in the plural as "melody, song" can also refer to poetry in particular (cf. OLD *s.v.*, 8b). Thus, the specific words that describe the swans' call simultaneously evoke the idea of human poetry and disavow it, both because these musical sounds are made by swans and because *canorus* can refer to a wide variety of sounds, both the output of the paradigmatic poet Orpheus and the call of the war trumpet.

Like the swans in the simile, the very fact that Messapus' Italian troops are singing as they go off to war (7.698) strikes a contrast with Homeric antecedents, and their music is described in very specific language that nonetheless

offers several possible understandings of what, exactly, the troops are doing. The behavior of Messapus' contingent differs from battle narrative in Homeric epic, which does not refer to martial music; Desport (1952, 400) offers a brief survey of war music in different genres and time periods of archaic and classical Greek literature. Moreover, music whose exact nature is both highlighted and obscured by the ambiguous language that describes it is sung by the troops as well as the swans. *Aequati numero* (7.698) could have either the military sense of "marching in formation" or a musical meaning, "with a steady beat". Ancient commentators read the phrase as referring to the drawing up of soldiers (Servius comments, *digesti in ordinem*), but Horsfall (2000, 456f.) discusses both possibilities in depth, concluding that the expression represents "perhaps not so much actual ambivalence (perfectly Virgilian though that is) as a nexus of implications more complex than at first appears" (457). Indeed, this phrase can best be understood as an example of the pervasive tendency in the *Aeneid*—and especially its similes—to focus readers' attention on a particular idea by offering several contrasting presentations of it and leaving it up to the reader to integrate the different perspectives.[15] Here, two different interpretations of the soldiers' actions are contained within a single phrase, distilling this technique of conveying ideas through contrasts into a particularly concentrated and effective form.

Contrasts with the specific details of swan similes in both *Iliad* 2 and *Argonautica* 4 highlight the presence and the specific qualities of the music in Vergil's comparison. At the same time, these allusions put forward themes central to this particular passage and to the *Aeneid* as a whole by means of contrasts between various antecedents and an *Aeneid* passage that alludes to those antecedents. This style of poetic composition showcases the way that Vergil uses intertextuality and open-ended, almost internally contradictory presentations of key ideas to weave the fabric of the *Aeneid*. For example, the prominent "song" element implied by *canoros ... modos* is absent from the closest Homeric parallel to this simile, the second of a series of similes for the Greek fighters before the start of the Catalogue of Ships in which they are compared to a flock of noisy birds (*Iliad* 2.459-66).

> τῶν δ᾽, ὥς τ᾽ ὀρνίθων πετεηνῶν ἔθνεα πολλά,
> χηνῶν ἢ γεράνων ἢ **κύκνων δουλιχοδείρων**,   460
> Ἀσίῳ **ἐν λειμῶνι**, Καϋστρίου ἀμφὶ ῥέεθρα,
> ἔνθα καὶ ἔνθα ποτῶνται ἀγαλλόμενα πτερύγεσσι,

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15   This kind of paradoxical contrast is one of the programmatic features of the first simile in the poem, on which see Beck 2014.

κλαγγηδὸν προκαθιζόντων, σμαραγεῖ δέ τε λειμών,
ὣς τῶν ἔθνεα πολλὰ νεῶν ἄπο καὶ κλισιάων
ἐς πεδίον προχέοντο Σκαμάνδριον· αὐτὰρ ὑπὸ χθὼν   465
σμερδαλέον κονάβιζε ποδῶν αὐτῶν τε καὶ ἵππων.

Like numerous tribes of winged birds
geese or cranes or **long-necked swans**
in an Asian meadow, around the streams of the Cayster,
in flocks they fly here and there on their wings,
alighting with *a loud clamor*, and the meadow is *full of noise*,
thus many tribes of men were pouring forth from ships
and huts into the Scamander plain. And the earth
was resounding loudly beneath the feet of men and horses.

The long-necked swans and their Asian habitat, as well as the carrying nature of their calls, appear in both similes. But the *Aeneid* swans produce explicitly musical sounds, whereas *Iliad* 2.463 uses words that imply noise and disorder to describe the birds. Κλαγγή in Homeric epic (8×) refers to a disorderly or non-verbal racket.[16] Similarly, the unusual word σμαραγέω is used elsewhere in the *Iliad* of the sea (2.210) or thunder (21.199), and in Hesiod's *Theogony* of the earth (679, 693). Thus, the musical qualities of the song of Vergil's swans emerges in part from the contrast with the random cacophony of the birds in the closest Homeric antecedent.[17]

In that *Iliad* 2.460 mentions several different species of birds in addition to the long-necked swans that are shared with *Aeneid* 7.699-702, the presence of many winged ἔθνεα in the *Iliad* may well give rise to an unharmonious variety of calls that sounds like noise rather than music. Indeed, the scholia on this simile point to the variety of groups making up "the Greeks" as one of the main thrusts of the comparison, and Muellner (1990, 65) emphasizes the social implications of the word ἔθνεα. The Italians under Messapus, too, comprise several different tribes (catalogued at 7.695-7), yet the *Aeneid* simile diverges from the *Iliad* comparison in likening Messapus' troops to one species of birds

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16   Cf. LfgrE *s.v.*; the adverbial form κλαγγηδόν is a ἅπαξ λεγόμενον. Three instanes of κλαγγή appear in *Iliad* 3.2-7, another simile comparing a flock of birds (cranes, in this instance) to troops.

17   I disagree with the claim of Horsfall (2000, 458) that the main point of the comparison in the *Iliad* is the number of birds present. As Hornsby (1970, 56f.) argues, sound (rather than movement, as in some other bird similes in the *Aeneid*) is the key feature of both the Vergilian and the Iliadic similes.

rather than to several different ones. When the story enumerates the various groups that accompany Messapus immediately before the simile, and then the simile represents these fighters as a single species of bird, this constitutes an intentional difference from the simile at *Iliad* 2.459-66. This choice brings forward not simply the musicality of the swans in contrast to the honking flocks of flapping birds in the *Iliad* simile, but also their harmonious unity. Since the simile and the story at this point in the *Aeneid* depict the 'unity' of a group—or lack thereof—in two different ways, and the *Aeneid* simile and the *Iliad* simile also differ in this respect, the passage raises questions about the nature of group identity. This is a particularly timely and important issue at the outset of a war in which the identities of the two sides are constantly shifting, in relation both to one another and to other warring groups throughout Roman history. Are the Italians a single group, or a chaotic collection of individual tribes? Are they most like the Greeks (via the *Iliad* simile), or the Trojans (via story parallels to the *Iliad*, in which a foreign force arrives by ship and besieges the local population)? No clear or obvious answers to these questions should be expected. Rather, a key purpose of the simile is to invite the reader to ask them at this juncture in the *Aeneid*.

The intertextual dimension to Vergil's swans simile provided by *Argonautica* 4.1296-1304 (itself a reworking of *Iliad* 2.459-63; cf. Hunter 2015, 257) creates an analogous contrast between an earlier simile and Vergil's rendering of it in order to highlight central themes. These themes include the relationship between musical genre and performance context, as well as the ability of human beings to correctly understand the context and implications of their own actions. In *Argonautica* 4, both orphaned chicks and singing swans depict the serving maidens that Arete had provided for Medea, lamenting alongside her as the Argonauts tearfully await death in the Libyan desert.

> νόσφι δὲ κοῦραι
> ἀθρόαι Αἰήταο παρεστενάχοντο θυγατρί.
> ὡς δ' ὅτ' ἐρημαῖοι πεπτηότες ἔκτοθι πέτρης
> χηραμοῦ ἀπτῆνες λιγέα κλάζουσι νεοσσοί,
> ἢ ὅτε καλὰ νάοντος ἐπ' ὀφρύσι Πακτωλοῖο   1300
> **κύκνοι** κινήσουσιν ἑὸν **μέλος**, ἀμφὶ δὲ λειμών
> ἑρσήεις βρέμεται ποταμοῖό τε καλὰ ῥέεθρα·
> ὣς αἵ ἐπὶ ξανθὰς θέμεναι κονίῃσιν ἐθείρας
> παννύχιαι ἐλεεινὸν ἰήλεμον ὠδύροντο (*Argonautica* 4.1296-1304).

At a distance [from the Argonauts] the huddled maidens
were lamenting beside the daughter of Aeetes.

> As when, abandoned after falling from a stone
> cleft, unfledged nestlings cry shrilly,
> or when on the banks of the beautifully flowing Pactolus   1300
> **swans** raise their **song**, and all around the dewy meadow
> and the lovely streams of the river resound.
> Thus the maidens let fall their blond hair in the dust,
> all night long wailing aloud their pitiable lament.

Like the *Aeneid* simile, this comparison highlights the organized musical vocalizing of a group of people, but the specific nature of the song plays a central role in both Apollonius' simile and the adjacent story. Apollonius, unlike Vergil, highlights the long-standing association of swan song with the moment of death:[18] both his swans and his humans are singing a dirge for themselves when they are on the verge of dying (or think they are). The abandoned chick simile at 4.1298f. that immediately precedes the vignette of the swans helps to make the swans' song a harbinger of death, since the chicks but not the swans are placed in harsh conditions likely to kill them.

   Just as differences between the Homeric antecedent and our *Aeneid* simile raise questions about the nature of group identity, so contrasts with this *Argonautica* parallel draw a reader's attention to the relationship between different kinds of song and performance context. The swans and the maidens in the *Argonautica* are both singing laments, although the Argonauts are rescued at the last moment by divine intervention. The soldiers in the *Aeneid*, in contrast, are praising their king,[19] but the swan motif—and the strong focus on death and lament in a comparable simile in the *Argonautica*—implies that these troops may also be singing a dirge for themselves without realizing it.[20] Swans, but not human beings, have the capacity to recognize and commemorate in song the moment of their own death. These parallels point to the absence of awareness on the part of Messapus' troops that their entry into battle in *Aeneid* 7 will lead to their doom, and more generally to the ironic and

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18   Arnott (1977) offers an entertaining and informative survey of swan lore, which proves that there really is such a thing as the "swan song."

19   Servius acutely calls *cano* a *polysemus* word in his comments on *Aen.* 1.1; as an example of the meaning *laudare*, he cites 7.698. The other meanings he mentions are "sing" and "prophesy."

20   Rieks (1981, 1079) also suggests that the swans foreshadow the defeat of Messapus' troops, but he draws on a (fairly loose) parallel with a simile at *Iliad* 15.690-2 in which Hector advancing on the Greek ships is compared to an eagle attacking a flock of birds (15.692 = 2.460), rather than the long-standing funereal associations of swans.

poignant gap that so often exists in the *Aeneid* between what the characters think is happening to them and what actually comes to pass.

Finally, the swan simile in *Aeneid* 7 resembles the similes of human song in both the *Odyssey* and the *Argonautica* not only in using a musical vignette to evoke themes central to the poem as a whole, but also in embodying that particular poem's view of epic poetry. The *Odyssey* depicts a skilled oral bard plying his craft; the *Argonautica* brings in Homeric epic and contemporary non-epic hexameter poetry to evoke a poetic landscape that ranges widely in both time and genre; and the *Aeneid*'s lone simile about song weaves a rich and sometimes contradictory tapestry of intertextual references that depicts the allusive, elusive nature of epic poetry in addition to its tales about birds and troops of Italian soldiers. Alongside the parallels with similes from Greek epic, the passage including this simile also forges connections with its Latin predecessors through the character of Messapus. According to Servius (*A.* 7.691), Ennius claimed Messapus as his own ancestor, and it was for this reason that Vergil introduced his troops singing and compared them to swans (*ab hoc Ennius dicit se originem ducere: unde nunc et cantantes inducit eius socios et eos comparat cycnis*).[21] In Servius' view, the swans evoke music not only through their own death songs, but also by making an intertextual allusion to Ennius.

In sum, the narrative in *Aeneid* 7.695-702, composed of both the swan simile and the adjacent story about Messapus and his followers, focuses on music in a simultaneously engaging and indeterminate way. The musical performance of the troops and the swans can be seen as both a very specific kind of song (war music, swan song) and as one instance of a broader and vaguer musical panorama (the various meanings of *numerus*, *modi*, and *canorus*). Moreover, the absence of music from the range of human crafts in the similes in the *Aeneid* contributes to the depiction throughout the poem of human beings as missing from or peripheral to the world around them, yet the similes nonetheless include a probing meditation on the nature of song that springs in part from a complex web of intertextual allusions to earlier poems. The contradictions and paradoxes created by the relationships between Vergil's swan simile and its various antecedents bring forward key themes of group identity, group harmony and cohesion, human comprehension of fate, and the appropriate contexts for the performances of different kinds of song, without offering clear positions on any of these issues. Finally, the narrative has fruitful similarities and differences with epic poets and poetry ranging from Homer through Ennius,

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21   Desport (1952, 406-9), develops this argument in more detail, calling Vergil's intertextuality here a "véritable métempsychose poétique" (407).

making the nature of epic poetry itself one of its subjects. Such themes and modes of presentation, in a nutshell, are characteristic of the "song" that Vergil has created with his own *Aeneid.*

Bibliography

Ardizzoni, A., ed. (1967). *Le argonautiche libro I*. Roma: Edizioni dell'Ateneo.

Arnott, W.G. (1977). Swan Songs. *G&R* 24, pp. 149-53.

Beck, D. (2014). The First Simile of the *Aeneid*. *Vergilius* 60, pp. 1-17.

Cook, E. (1999). 'Active' and 'Passive' Heroics in the *Odyssey*. *CW* 93, pp. 149-67.

de Jong, I.J.F. (2001). *A Narratological Commentary on the Odyssey*. Cambridge: Cambridge University Press.

Desport, M. (1952). *L'incantation virgilienne: essai sur les mythes du poète enchanteur et leur influence dans l'oeuvre de Virgile*. Bordeaux: Imprimeries Delmas.

Edwards, M.W. (1991). *The Iliad. A Commentary* 5. *Books 17-20*. Cambridge: Cambridge University Press.

Finkelberg, M. (1998). *The Birth of Literary Fiction in Ancient Greece*. Oxford/New York: Clarendon Press.

Fowler, D.P. (1991). Narrate and Describe: The Problem of Ekphrasis. *JRS* 81, pp. 25-35.

Hornsby, R.A. (1970). *Patterns of Action in the Aeneid: An Interpretation of Vergil's Epic Similes*. Iowa City: University of Iowa Press.

Horsfall, N. (2000). *Vergil, Aeneid 7. A Commentary*. Leiden: Brill.

Hunter, R. (2015). *Apollonius of Rhodes Argonautica Book IV*. Cambridge: Cambridge University Press.

Lonsdale, S.H. (1990). Simile and Ecphrasis in Homer and Vergil: The Poet as Craftsman and Choregrapher. *Vergilius* 36, pp. 7-30.

Mackie, H. (1997). Song and Storytelling: An Odyssean Perspective. *TAPhA* 127, pp. 77-95.

Muellner, L. (1990). The Simile of the Cranes and Pygmies: A Study of Homeric Metaphor. *HSPh* 93, pp. 59-101.

Race, W.H. (2008). *Apollonius Rhodius Argonautica.* Cambridge: Harvard University Press.

Ready, J.L. (2008). The Comparative Spectrum in Homer. *AJPh* 129, pp. 453-96.

Ready, J.L. (2010). Why Odysseus Strings His Bow. *GRBS* 50, pp. 133-57.

Rieks, R. (1981). Die Gleichnisse Vergils. In: *Aufstieg und Niedergang der römischen Welt* 2/31.2, pp. 1011-1110.

Rood, N.J. (2008). Craft Similes and the Construction of Heroes in the *Iliad. HSPh* 104, pp. 19-43.

Rutherford, R.B. (1986). The Philosophy of the Odyssey. *JHS* 106, pp. 145-62.

Steiner, D., ed. (2010). *Homer Odyssey Books XVII-XVIII.* Cambridge: Cambridge University Press.

Tibia and *Tuba* at the Crossroads of Funerary and Nuptial Imagery

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Abstract

References to music in poetry often play a genre-defining role. This is the case in Propertius 2.7 and Ovid *Heroides* 12, which employ the *tibia* and *tuba* in the *topos* of a mournful wedding. While the pipes belong to the motivic repertoire of elegy, where they usually occur in plaintive contexts, the introduction of the funeral trumpet to an elegiac motif is an innovation, reflecting traditional uses of the instrument during burial rituals. The wedding *tibia* is also represented in its authentic performative context, but the joyous character of its tunes is rendered more sorrowful than funeral music, and thus in keeping with conventional portrayals of the instrument in elegy. On the other hand, the representation of the *tuba* in this motif stands in opposition to other literary depictions, which usually place the clamorous sound and military, rather than funerary, uses of the instrument in the foreground. In consequence of this thematic innovation, the funeral trumpet not only becomes part of a mournful wedding *topos* but also a 'genre-appropriate' instrument in elegy.

Keywords

1 Instrumental Accompaniment (un)Suitable for Elegy

Ovid acknowledges the *tibia* as an appropriate instrument for elegy in the introductory poem to the fifth book of his *Tristia* (5.1.47f.):

interea nostri quid agant, nisi triste, libelli?
    tibia funeribus convenit ista meis.

At first glance, such a bond appears hardly unusual, since musical instruments were not infrequently associated with poetic genres.[1] Nevertheless, the connection between elegy and the *tibia* is less obvious than that between lyric and its accompanying instrument, the lyre; therefore, in order to examine it, its sources invite a closer look. Firstly, Roman love elegy arose from and referred to a number of poetic forms, some of which were accompanied by the instrument, as for instance *skolia*.[2] Secondly, marital and funerary themes, eagerly introduced by the Roman elegists, alluded to performative contexts especially marked by the presence of the *tibia*. The latter answers for the association Ovid makes between the instrument and the plaintive tone of his *Tristia*, which he overtly compares to a funeral. It is noteworthy that the poet perceives this association as suitable (*convenit*), thus referring in a certain manner to the Aristotelian notion of appropriateness, according to which poetic genres were defined by a set of appropriate formal features (for instance, the heroic hexameter was considered well-suited to tragedy [*Poetics* 1459b]).[3] The notion that generic characteristics include a musical component is by no means limited to this passage; a corresponding idea phrased in a similar way emerges from the

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1   Assuredly, a relationship between elegy and the *aulos* was established already at an early stage of the genre's development. Some etymologies derive the name of the genre from ἔλεγος, or ἔλεγοι, a *nomos* sung to pipe accompaniment on sorrowful occasions (West 1974, 7). The pipes appear to have also been a common accompaniment of early sympotic songs (West 1974, 13f.; Garner 2011, 4).

2   On the Greek models of Roman love elegy, see Farrell 2012. Originally, the performative venue of elegies were *symposia* (cf. Aloni 2001, 88). The road from *aulos*-accompanied *skolion* to Roman love elegy might have taken many turns. Mimnermus and Theognis, two poets considered as the founders of elegy, explored sympotic themes and possibly wrote drinking songs as well. Mimnermus himself was even represented by Hermasianax as playing the pipes himself in a κῶμος (cf. West 1974, 12). Early *auloi*-accompanied elegy is often associated with Olympus and Klonas (cf. West 1992, 335). Iconographic evidence is provided, for instance, on the Munich vase (Munich 2646; cf. West 1992, 210) and on a drinking cup from the Louvre (G 135; cf. Mathiesen 1999, 141). Apart from visual material, internal evidence also bears witness to the presence of *auloi* music during *symposia*, as for instance a direct address to an *aulētēs*, αὔλει μοι, from a *skolion* recorded on a papyrus from Elephantine (*Adespota Elegiaca*, 27; cf. Faraone 2008, 72f., 75f.).

3   Cf. Harrison 2007, 3. In his *Ars Poetica* Horace also employs the idea of appropriateness of subject matter to metrical form (73-85). The analysed passages foreground the congruence between subject-matter and character rather than metre.

spurious fifteenth letter of the *Heroides*, in which Sappho disavows her lyric allegiance, stating that the *barbitos* is not appropriate for the elegiac poetry inspired by her rejected love (*Her.* 15.7f.): *flendus amor meus est; elegiae flebile carmen; / non facit ad lacrimas barbitos ulla meas.*[4] The instrument, which frequently served as a metonymy for Lesbian lyric, matches in this case neither the theme of the poem—unrequited love—nor its lugubrious character. Also, the lyre, evoked in another passage as a symbol of Ovid's poetry in general, fails to provide a suitable accompaniment to joyful songs (*Ep. ex Pont.* 3.4.45): *Adde quod adsidue domini meditata querelas / ad laetum carmen uix mea uersa lyra est.* In all three of these passages elegy is portrayed by means of catchphrases aimed at rendering its sorrowful tone, such as *flebile carmen, querela, flebilis, tristis*.[5] Quite on the contrary, other metapoetic motifs, found for instance in the *recusationes*, depict elegy according to Callimachean models as a light-hearted genre in opposition to politically-engaged epic.[6] Interestingly, among a variety of themes embraced by Roman love elegy, those which employ motifs of disappointed love, tears, sadness, death, and elegiac *dolor* interrelate with the idea of music as (un)suitable accompaniment. In these contexts, references to musical instruments either serve as metaphors of poetry in a broad sense or are simply designed to evoke the character of their performative circumstances, such as funerals.

In what follows, I shall present the elegiac motif of the contrast between the wedding *tibia* and the funeral *tuba*. I will argue that this motif was forged in adherence to musical practice during the Augustan period, which accounts for the lack of corresponding Greek models. Furthermore, I shall trace the motif's origins and potential variations in other literary genres. Finally, I will seek to analyse the elegiac occurrences of the *tuba* in connection with its Roman/Etruscan background, and I will demonstrate that the *topos* of the mournful trumpet conceived by Augustan elegists is absolutely unique among literary depictions of the instrument, since its sound was recognised above all for its voluminous quality rather than for its plaintive tone.

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4   On genre-related issues of *Heroides* 15, see Davis 2007.

5   Ovid asserts in yet another passage from the *Tristia* that the character of poetry should be suitable to its thematic material (5.1.5f.): *flebilis ut noster status est, ita flebile carmen, / materiae scripto conveniente suae.*

6   On *recusationes* in the context of appropriateness, see Harrison 2007, 7. An example of such a *recusatio* depicting a lyre as a metonymy of poetry can be found in Horace's *Odes* 3.3.69-72: *non hoc iocosae conveniet lyrae. / quo, Musa, tendis? desine pervicax / referre sermones deorum et / magna modis tenuare parvis.*

2   *Tibia tristior illa funesta tuba*

The funeral trumpet and the wedding pipes meet quite unexpectedly at the crossroads of funeral and nuptial themes. The motif juxtaposing the two instruments has been twice embedded in a similar context, which renders nuptial rites, quite contrary to their inherent connotations, a sorrowful event. In both cases the wedding of a former lover evokes associations with a funeral cortege, inspired by ritual music, whose character is interpreted in accordance with the emotions experienced by the speaking voice.

In a poem criticising the introduction of a law enforcing marriage on members of the upper classes,[7] Propertius fancies himself married against his will and thus compelled to betray his beloved Cynthia. The sound of his wedding *tibia* would seem to her more wistful than that of a funeral trumpet (2.7.7-12):

> nam citius paterer caput hoc discedere collo
> > quam possem nuptae perdere more faces,
> aut ego transirem tua limina clausa maritus,
> > respiciens udis prodita luminibus.
> a mea tum qualis caneret tibi tibia somnos,
> > tibia, funesta tristior illa tuba!

Although it is not clearly stated that the married Propertius passes by Cynthia's door on his wedding day,[8] the presence of the *tibia* implies, albeit indirectly, a nuptial procession.[9] Another beacon of wedding imagery may also be *fax*, eagerly employed in literature as an emblematic element of the wedding *pompa*.[10]

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7   The particulars of this law and its project are not known. It is assumed that the debate on marriage might have taken place around 28/27 BC as a part of Augustus' social reforms; cf. Fedeli 2005, 221-5. In the glossary to her book, James considers different scenarios accompanying the introduction of such a law. She is convinced that the project was abandoned after it had been met with strong resistance from the upper classes (James 2003, 229-31).

8   The participation of Roman bridegrooms in *deductio* is not certified in the sources; cf. Hersch 2010, 147.

9   Verse 8, which contains references to wedding rites, is difficult. Especially *perdere more*, although generally accepted, raises doubts of editors and commentators; cf. Allen 1992; Fedeli 2005, 228f.; Heyworth 2007, 140f. Interpretations and renderings of this verse as well as of the whole poem likewise vary; see, for instance, Gale 1997; Flach 2011, 42, et al. I follow these scholars, who perceive *faces* as a signpost of both wedding and funeral processions; cf. Cairns 2007, 148.

10   On the function of wedding torches in Roman weddings and in literature, see Hersch 2010, 164f. Also, Fedeli recognises *faces* of verse 8 as a signal of the wedding procession; cf. Fedeli 2005, 229.

The reference to the instrument could perhaps be perceived as a double-entendre; on the one hand it is quite plainly a wedding *tibia* heard by Cynthia from behind a closed door and, on the other, it is a metaphor for Propertian poetry. Such an interpretation, however, would be unusual, since the instances when the *tibia* stands metonymically for poetry, or more precisely elegy, are indeed very few.[11] Additionally, as has been pointed out by Heyworth, verse 11 may have been corrupt, and the emendation he proposes excludes the *tibia* from the verse, which would render the interpretation involving the metonymy rather unlikely.[12] It is important to note, however, that if the *tibia* is not interpreted in connection to the wedding ceremony, the intended contrast with a funeral trumpet is somewhat lost.

The second occurrence of the motif is ostensibly indebted to the Propertian passage, which only confirms the wedding context of the latter. This time nuptial themes have been more distinctly accentuated by means of two characteristic elements, namely wedding torches and music. In the ears of spurned Medea, the joyful instrumental tunes of Jason's wedding sound even more mournful than a funeral trumpet (Ovid *Heroides* 12.137-42):

> ut subito nostras Hymen cantatus ad aures
>   venit et accenso lampades igne micant
> tibiaque effundit socialia carmina vobis,
>   at mihi funerea flebiliora tuba,
> pertimui, nec adhuc tantum scelus esse putabam,
>   sed tamen in toto pectore frigus erat.

It seems that both passages make reference to *deductio*, the procession leading the bride to the bridegroom's house. There can be no doubt that the *Heroides* passage alludes to this particular part of the nuptial rites, as it evokes two

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11   Despite its elegiac connotations the *tibia* was practically never imagined as a medium of this genre. As has often been argued, in the Horatian odes, for instance 1.1.32, 1.12.2, 3.4.2, the pipes, usually in the company of the *kithara*, designate choral lyric; cf. Lowrie 1997, 348 n. 46. As a matter of fact, apart from the lyre, other instruments rarely symbolise poetic genres, perhaps with the exception of the *avena*, which is often considered to stand for bucolic; cf. Smith 1970. It is noteworthy that *mea tibia* (Prop. 2.7.11) is to some degree evocative of the same phrase from the eighth eclogue of Vergil (*incipe Maenalios mecum mea tibia, versus*), which, according to some, may be a metonymy of poetry (cf. Smith 1970, 505; Karakasis 2011, 141), although, in my view, surely not bucolic.

12   Heyworth explores various implications of this couplet. Most importantly, he also perceives the *tibia* as a participant of a nuptial *pompa* and he acknowledges its metonymic function, which he, however, refutes by conjecturing Cynthia instead of *tibia* in verse 11; cf. Heyworth 2007, 141.

most recognisable elements that accompanied the bride during *deductio*: the songs to Hymenaeus and wedding torches.[13] Although inscribed in the literary depiction of weddings to a far lesser degree, music poured forth by the *tibia* (here designated as *socialia carmina*) was also emblematic of the procession.[14] Moreover, employing musical motifs is easily accounted for in this particular instance; just as in the Propertian passage, music of the *tibia*, unlike other components of the procession, can quite conveniently be associated in terms of its character with the tone of elegy, i.e. *flebiliora*. In this respect, one can hardly fail to notice a lexical analogy with *elegiae flebile carmen* of *Heroides* 15.7. Ultimately, from the point of view of performative practice, it is interesting to consider whether we can draw a parallel between the wedding contexts of *Heroides* 12 and Propertius 2.7. As has been pointed out, whereas Jason's nuptials may be, or even should be, carried out according to Greek tradition,[15] Propertius certainly has a Roman ceremony in mind. Obviously, the *hymenaios* songs performed during the procession were derived from Greek tradition, but beginning from the Republican period they were performed also during Roman nuptials, at least according to what can be inferred on the basis of literary depictions of weddings.[16] If we accept that Jason's ceremony was intentionally represented as Greek, then the *tuba* would stand out as a detail absorbed from the originally Roman performative setting. However, since the *tuba* does not come forth as a wedding motif but serves as means of providing contrast, its lack of congruence with Greek nuptial imagery is of minor consequence.

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13   An example of such a chant is perhaps one of Catullus' *Epithalamia*, Poem 61, invoking Hymenaeus in its refrain. To the two mentioned nuptial motifs it also adds Fescennine joking and throwing nuts, which were exclusively Roman customs; cf. Hersch 2010, 140 n. 22, 152, 241, 237.

14   One of the few Homeric passages comprising musical instruments depicts wedding rites with all their characteristic elements: torches, *hymenaios* songs and dance accompanied by the *auloi* and *phorminges* (*Il.* 18.490-6); cf. Mathiesen 1999, 127. Similarly, Terentius *Ad.* 907: *Missa haec face, Hymenaeum turbas lampadas tibicina*s. Whether *socialia carmina* are meant as accompaniment to songs invoking Hymenaeus in the fashion of Catullus' Poems 61 and 62, is not clear (definitely the case in Plaut. *Cas.* 750); cf. Hersch 2010, 32, 237f. The songs should be distinguished from the call 'Hymen, Hymenaee', which was perhaps customary at the doorstep of the groom's house or during the procession; cf. Hersch 2010, 149, 239f. It is plausible that the cry rather than songs was the most distinct feature of the wedding *pompa*, since in the case of both Seneca's *Medea* 116 and Ovid's *Heroides* 12.143, Medea recognises the nature of the festivities, when she hears the wedding call. Arguably, 'Hymen' might have replaced the traditional Roman cry *Talassio*; cf. Hersch 2010, 149, 238f.

15   Cf. Heinze 1997, 183.

16   Cf. Hersch 2010, 237, 247, 249f.

3   Wedding as Funeral

So much for the joyful nuptial imagery. Although love elegy eagerly employs wedding motifs, it is intrinsically hostile to matrimony; thus weddings are usually depicted as dismal events.[17] It is no different in the case of Ovid's *Heroides* 12 and Propertius 2.7, in which the atmosphere of revelry is subverted by means of the wedding *tibia*-funeral *tuba* motif, deftly forged to conform with the generic conventions of elegy. The motif arose from a number of other themes, not necessarily of elegiac origin, but not far removed from elegiac contexts. The thematic range it encompasses covers abundant motivic material (some of which has already been discussed), such as the dichotomies of wedding-funeral and love-death, music as a metonymy of poetry, genre-appropriate musical accompaniment, and finally elegiac *dolor* signalised by the catchphrases *flebiliora, funesta, funerea* and *tristior*.

It seems that the motif derived mainly from the *topos* of a mournful wedding, a prominent theme in Greek literature.[18] On a metaphorical level the wedding was perceived as a rite of passage putting an end to a certain stage of life in a parallel manner to death and burial.[19] Notably, this perception concerned mainly the bride, who was forced to abandon her family, relinquish her maiden lifestyle and, above all, surrender her virginity. It was, therefore, often expected of her to weep during the wedding procession and display sincere or feigned reluctance to marry as an overt token of her modesty and inexperience. Bridal tears, with which the bride bemoaned her bygone childhood, added a sorrowful touch to the otherwise joyful celebrations.[20] In addition, the Greek wedding traditionally featured a staged abduction of the bride

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17   Since elegiac *puellae* were unmarriageable, a wedding usually signified the end of love for their lovers—a threat Propertius is facing in *Elegy* 2.7. However, nuptial motifs were also sometimes employed in reference to the poets' liaisons with the *puellae* in order to lend them an appearance of formal unions (*foedus*), as for instance in Prop. 3.20; cf. James 2003, 46f.

18   The *topos*, based on the dichotomies of love and death, marriage and funeral, has many names. Its Italian rendition, *il matrimonio funesto*, holds for me the most appeal; cf. Bessone 1997, 201. Often styled as a 'marriage to Death', the *topos* reflected the fate of famous tragic heroines, like Antigone or Iphigenia; cf. Hersch 2010, 140. Other names include, for instance, *funereus thalamus*; cf. Turcan 1963, 153.

19   Cf. Hersch 2010, 140 n. 21. The end of life (τέλος) is naturally an omnipresent theme on epitaphs. Suffice it to mention the famous *Seikilos Epitaph* (line 4), which was equipped with musical notation and possibly performed to *aulos* accompaniment; cf. Hagel 2010, 356.

20   For the meaning of bridal tears and public mourning during Roman weddings, see Hersch 2010, 144f.

by the members of the groom's family, which readily provided an association
with a motif of abduction by death explored in funerary themes.[21]

Similarly, in literature the *topos* of the mournful wedding pertained mainly
to young, newlywed, and unwed women who died on their wedding night or
before marriage.[22] Its earliest occurrences are recorded on epitaphs, whence
it, in all likelihood, originated and then pervaded the imagery of funerary epi-
grams, tragedies, and much later also novels.[23] Since wedding and funeral rites
were characterised by a number of analogous features, a comparison between
them could easily be drawn.[24] Such a juxtaposition resulted in the birth of the
topos which usually employs the following parallels of the rituals: wedding
and funeral torches, invocation of Hymenaios and wailing, wedding songs and
dirges, the wedding bed and the pyre, the bridal veil and the shroud, and at
times also instrumental music.[25] Torch-fire was often perceived as a metonymy
of the wedding itself; hence it is the most common motif in the *topos*.[26] Vocal
music accompanying both rites, either in the form of the wedding cry turned
into wailing or the wedding songs unfolding into dirges, often takes second

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[21]   The theme of death snatching away the life of a young woman likened to a husband de-
       priving her of virginity is present, for instance, in *AP* 7.182 and 183. Because of their asso-
       ciation with the myth of Persephone, tombs of women were metaphorically referred to as
       the 'chamber of Persephone'—a frequent motif in 4th century BC Attic funerary epigrams
       (also *AP* 7.489, 507B); cf. Tsagalis 2008, 95. For the motif of premature death envisaged as
       abduction by gods, see Wypustek 2013, 97f.

[22]   It is barely conceivable that the *topos* of 'marriage to Death' was modelled on actual inci-
       dents of brides dying on their wedding night. Much more likely, it symbolised deaths of
       young women of marriageable age; cf. Wypustek 2013, 100. There is, however, no evidence
       in the epigrams themselves to support such a claim. While in most cases epigrams which
       employ the 'wedding-burial' parallel explicitly mention death on the wedding night, pre-
       mature death of both boys and girls is often represented as 'death before wedding'; cf. *AP*
       7.486, 487, 488, 489, 507B, 515.

[23]   Some of the earliest preserved occurrences of the theme date back to the 6th century BC;
       cf. Wypustek 2013, 99. On the employment of the *topos* in novels, see Turcan 1963, 153f. For
       the sources of funeral imagery on epitaphs, see Day 1989, 22f.

[24]   Cf. Hersch 2010, 237; Wypustek 2013, 118.

[25]   Cf. Bessone 1997, 201.

[26]   For instance, *AP* 7.185. On the juxtaposition of the funerary and nuptial torch, see Hersch
       2010, 165f. Wedding torches, owing to the association with funeral torches or a burning
       pyre, could symbolise a doomed marriage; cf. Hersch 2010, 166. This double-entendre
       was also eagerly explored by Roman elegists (e.g., Prop. 4.3.13f.; Ov. *Her.* 6.41ff., 21.172); cf.
       Cairns 2007, 148 n. 27.

place as a crucial feature of the ritual soundscape.[27] Some of the epigrams include a combination of the analogies. For instance, whereas *AP* 7.183 is composed around the opposition of the *hymenaios* songs and dirges, *AP* 7.188 refers to the torches, songs, and the contrast between the wedding bed and the funeral pyre. *AP* 7.712 (dedicated to Baucis, a companion of Erinna) uses a similar set of images, only substituting funeral torches for a burning pyre.[28] Significantly, references to instrumental music never occur in the parallels; they are usually interwoven into the wedding imagery and do not have a counterpart in the funeral rites. This is the case in *AP* 7.182 and 7.186, both of which depict the *auloi* (λωτοί) as a participant in the nuptial music played at the door of the bride's house or inside the bridal chamber.

Coming back to our elegiac passages, we will instantly recognise all the characteristic elements of the mournful wedding *topos*. This is especially obvious with regard to Ovid's *Heroides* 12, where *Hymen, lampades* and *socialia carmina* pertain to the wedding imagery. However, contrary to the epigrams discussed above, corresponding funerary imagery would practically be absent, were it not for the *funerea tuba*. Since instrumental music is not a part of the *topos*, and definitely not of the contrastive pairs at any rate, its source has to be sought elsewhere.

4   *Tibia nuptialis, tibia zygia*

As far as the *tibia* is concerned, the task should not prove very difficult, because the instrument is omnipresent in nuptial imagery, both in iconography and literature. Abundant visual material places the *aulos* usually within the wedding procession. Attic vase painting depicts male as well as female players, although αὐλητρίδες are more often present in all-female company during wedding preparations, found, for instance, in a procession carrying the bride's bathwater to

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27   For instance, *AP* 7.183, 188, 712. In Greek mythology Hymenaeus was a young man who died on his wedding night; hence his frequent appearances in funerary motifs. The name of the nuptial songs and cry might have actually originated from a different source; cf. Hersch 2010, 237 n. 28.

28   For further examples of the *topos* in epigrams and epitaphs, see Wypustek 2013, 100. The theme emerges in a similar form in tragedy. For instance, Cassandra equates her impending marriage to Agamemnon with the burial of her father by means of the same wedding-funeral parallels (Eur. *Tro*. 308-40). Also, Antigone, when led to her death, regrets not ever having the nuptial songs and the wedding cry sound for her (Soph. *Ant*. 810).

her home.[29] Significantly, whereas nuptial imagery in literature favours the pipes over any other instrument, the lyre participated in wedding ceremonies no less frequently than the *auloi*, according to iconographic evidence.[30]

Likewise, in the Roman period the presence of the *tibia* during various rites is sufficiently attested, particularly in the theatre, during weddings and funerals, as is demonstrated by the well-known passage from Ovid's *Fasti* (6. 659f.): *cantabat fanis, cantabat tibia ludis, cantabat maestis tibia funeribus*, followed by an account of the *tibicines* on strike in Tibur, who rebelled against a law restricting the number of instrumentalists in funeral and wedding processions.[31] Interestingly, there is reason to suppose that the nuptial tunes played by the *tibia* symbolised in a certain fashion the wedding rites, since in a passage from *Rhetorica ad Herennium* (4.44) the instrument, rather than the wedding torches, is cited as a metonymy of marriage in an example of *pars pro toto*: '*Non illae te nuptiales tibiae eius matrimonii commonebant?' Nam hic omnis sanctimonia nuptiarum uno signo tibiarum intellegitur.* The passage suggests not only that the nuptial melodies could easily be recognised even by their initial tones, but also that there was a special kind of pipes, *tibiae nuptiales*, designated for wedding music,[32] unless, of course, the author employs a metonymy (nuptial pipes in the place of nuptial tunes played by the pipes) in order to explain *pars pro toto*. Unfortunately, the evidence to argue for or against such an idea is insufficient.

The wedding *tibia* emerges once more in the preserved Latin corpus as a presumably special kind of the instrument under the name *tibia zygia*, believed

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29   E.g., Red-figure vases: Athens National Museum 1174, 1388, 1453, 14791; Badisches Landesmuseum Karlsruhe 69/78; London British Museum D 11; Berlin Staatliche Museen 3373; Copenhagen National Museum 9080; cf. Oakley and Sinos 1993.

30   Especially in wedding dances and processions, e.g., Mykonos Museum 970; New York Metropolitan Museum of Art 56.11.1; Florence Museo Archeologico Nazionale 3790; Berlin Staatliche Museen F 2530, etc.; cf. Oakley and Sinos 1993. Literary depictions of nuptial rites featuring the pipes include, for instance, Sappho 44, in which also a reference to the *kithara* is conjectured, and Eur. *IA* 438, where the instrument accompanies the prenuptial sacrifices.

31   Livy offers a different reason for the strike of the *tibicines*: they were prohibited from dining in the temple of Jove (9.30). For iconographic depictions of the *tibia* accompanying Etruscan and Roman weddings and burials, see, for instance, Fleischhauer 1978, 26f., 41f., 52f.

32   Evidence of the existence of special nuptial pipes is scarce. According to Pollux (4.80), γαμήλιον piping denoted two pipes of unequal length played in an octave; cf. West 1992, 91. It is impossible to tell whether these had anything in common with the *tibia nuptialis* or *zygia*.

by some to be a *terminus technicus* for the wedding pipes.[33] This occurs in a passage from the Apuleian *Metamorphoses*, where the instrument participates in the familiar *topos* of a mournful wedding (4.33):

> Iam feralium nuptiarum miserrimae uirgini choragium struitur, iam taedae lumen atrae fuliginis cinere marcescit, et sonus tibiae zygiae mutatur in querulum Ludii modum cantusque laetus hymenaei lugubri finitur ululatu et puella nuptura deterget lacrimas ipso suo flammeo.

The passage provides clear proof that the *topos* continued to thrive in later literature, and that instrumental music finally obtained a firm place among the pairs used in wedding-funeral analogies. It is noteworthy that, while in the case of the wedding imagery all its elements fall within the scope of the aforementioned models, they have been paired with somewhat unusual funerary counterparts. The melody of the *tibia*, for example, is contrasted with the plaintive Lydian mode, which was commonly associated with mourning.[34] What actually appears to be quite intriguing, is that the pipes provided accompaniment for burial processions as well as for wedding rites, yet the two different kinds of instrumental music are in fact never juxtaposed. Moreover, apart from the passages discussed above (Ov. *Tr.* 5.1.47f.; *F.* 6.659f.), the funereal *tibia* is sparsely represented in literature.[35]

5   *Tuba funesta*

On the basis of Ovid's *Heroides* 12.140 and Propertius 2.7.12 some commentators conclude that the *tibia* was a wedding instrument, while the *tuba* was a funeral one.[36] Such an assumption is hardly accurate, even if drawn only with regard to the literary depictions of both instruments. Firstly, in the Etruscan and early

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33   Cf. Fedeli 2005, 231f.

34   This parallel should be interpreted as a metaphor for mournful melody, rather than as an indication that the Lydian mode was employed in funerary music. On the diverse connotations of the Lydian mode, see Anderson 1966, 143. For quite different connotations of the Lydian mode played on the *tibia*, see Hor. *C.* 4.15.30.

35   Other notable examples of a funereal *tibia* include a reference to a Phrygian *aulos* accompanying a burial scene (Stat. *Theb.* 6.120) and a definition of *nenia* (Pomp. Fest. *De Verb. Sig.* 161.47): *Naenia est carmen, quod in funere laudandi gratia cantatur ad tibiam.* In this respect, Etruscan and early Roman iconography provides more examples than literature; cf. footnote no. 31.

36   Cf. Esteve-Forriol 1964, 146; Fedeli 2005, 232.

Roman iconography the two instruments feature in both weddings and funerals, often side by side.[37] Secondly, it has to be taken into account that literary imagery often fails to reflect the nuances of performance practice; therefore it should be handled carefully as source material. A number of other instruments are attested as customary for burial and wedding processions in early Rome: for instance, the *cornu*, a bronze instrument of Etruscan provenance. Yet, although their presence was acknowledged in literature, they never acquired significant symbolic function on par with the *tuba*.[38] In all evidence, the Roman trumpet was closely related to the Etruscan *lituus*, or even developed from it, as some invention-stories suggest.[39] The two instruments seem to have initially coexisted until the *tuba* replaced the *lituus* in most of its performative contexts.[40] By the Augustan period the literary depictions of the *tuba* in funerary contexts had indeed outnumbered those of any other instrument. As

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37   For instance, a wedding procession including a *liticen, cornicines* and four *tibicines* is depicted on an Etruscan sarcophagus from Amiternum, while a similar set of instruments (*cornu, lituus, kithara* and *tibia*) accompanies a funeral scene on a sarcophagus from Chiusi; cf. Landels 1999, 179f.; Fleischhauer 1978, 40f., 54f.; footnote no. 39. Certainly visual depictions of the pipes in Etruscan art are much more numerous than of any other instrument, therefore a comparison with the *lituus* cannot be easily drawn; cf. Lawergren 2007, 120.

38   Apart from the *tibiae*, lyres and *cornua* are frequently depicted as members of ritual processions. Although the *cornu* was in many aspects comparable to the *lituus*, its presence was acknowledged by literary sources to a far lesser extent; cf. Joncheray 2010, 310. Depictions of the *cornua* alongside *litui* include a sarcophagus from Cerveteri, late 5th c. BC, Vatican Museum, a sarcophagus from Vulci, mid 4th c. BC, Boston Museum of Fine Arts, and a sarcophagus from Amiternum, 1st c. BC, Museo Civico, L'Aquila; cf. Brendel 1978, 324, 381; Fleischhauer 1978, 54f.; Jannot 1994, 72; Spivey 1997, 94, 168.

39   E.g., Hyg. 274.20f.; Plin. *HN* 7.201; Sil. *Pun.* 5.12f.; cf. Jannot 1988, 311f. Among the passages that credit the Etruscans with the invention of the trumpet, only Hyginus' rather gruesome account places the instrument within a funerary context. According to it, trumpets were invented in order to summon a community for a burial and put an end to cannibalistic practices, while in Rome its sound signified that the deceased did not die from poison or sword. A depiction of the *lituus* in funerary contexts can be found, for instance, in the Tomb of the Well, the Golini II Tomb and the Tomb of the Shields; cf. Banti 1973, 126. On the role of music in Etruscan funerary rites, see Jannot 1988, 324f. In addition, it should be noted that 'funerary context' is a rather broad term, as it includes a number of rites, such as *prosthesis*, funeral banquets, processions or games, which often prove hard to identify in visual depictions; cf. Joncheray 2010, 209-10.

40   Roman authors often failed to make a distinction between the *lituus* and *tuba*. Apparently, the instruments were considered by some as subgenera of the same kind (Gell. *NA* 5.8.8); cf. Joncheray 2010, 306. On the other hand, the instruments were sometimes represented side by side; cf. Hor. *C.* 1.1.23.

Gellius much later attests, there was even a different kind of trumpet, specially designated for use in burial rites.[41]

However, with regard to our wedding *tibia*—funeral *tuba* motif, the unusual portrayal of the latter instrument is noteworthy. For a number of reasons, the music accompanying burial was valued for its volume rather than melodic merits;[42] thus in most cases the trumpets were imagined as clamorous.[43] Examples abound. Apuleius singles the trumpet out for its fierce roar (*Flor.* 17.33: *tuba rudore torvior*). Funerals of important figures were expected to be especially loud, not only in order to draw more attention, but also to honour the celebrated status of the deceased.[44] This is the case with Claudius' burial, which was accompanied by such a voluminous sound of trumpets, horns and every possible kind of bronze instrument, as Seneca puts it (*Apoc.* 12.1), *ut etiam Claudius audire posset*. Petronius (78) also draws a funeral scene dominated by the sound of *cornua* summoned by a drunken Trimalchio to solemnise his mock funeral, which comes to an abrupt end when a fire brigade rushes in, apparently alerted by the great noise made by the instruments. Evidently, funeral tunes and fire alarm signals were easily confused, as the intensity of sound took precedence over melodic line. It is also remarkable that in both passages the volume produced by bronze instruments seems to serve as a vehicle of irony employed in order to mock the prominent deceased.[45]

The elegiac depiction of the *tuba*, which renders it as above all mournful, stands in overt contrast to its hitherto listed occurrences.[46] Apart from the

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41 Gell. 20.2.3: *Nos autem in Capitonis Atei coniectaneis inuenimus 'siticines' appellatos, qui apud sitos canere soliti essent, hoc est uita functos et sepultos, eosque habuisse proprium genus tubae, qua canerent, a ceterorum tubicinum differens.*

42 Sounds and noises were believed to ward off evil. To this purpose different instruments, especially idiophones such as bells and rattles, were placed in the vicinity of tombs; cf. Wille 1967, 70.

43 The kind of sonority which was expected from the *tuba* is aptly rendered in comparison to the *tibia* by Cornelius Fronto (*Ad M. Caesarem et Inv. Epist.* 3.1.1): *ut qui scias eloquentiam Caesaris tubae similem esse debere, non tibiarum, in quibus minus est soni, plus difficultatis.* The Etruscan *lituus* was associated above all with its piercing sound and signal function, as is affirmed by some etymological theories, which derive the name of the instrument from *litare* (giving signs, signalising); cf. Joncheray 2010, 306 n. 1010.

44 In Etruscan culture a crooked staff resembling a *lituus* was a symbol of the magistracy; hence the frequent depictions of the instrument as insignia of power; cf. Jannot 1994, 72.

45 For further instances of funeral *tubae*, see Verg. *Aen.* 11.192; Hor. *Serm.* 1.6.43; Ov. *Am.* 2.6.6; Sen. *Octavia* [sp.] 721. All of them represent the trumpet as clamorous.

46 A mournful *tuba* in a funeral context is also depicted in Propertius' *Elegy* 4.11 (4.11.9f.): *sic maestae cecinere tubae, cum subdita nostrum / detraheret lecto fax inimica caput.*

motif of the wedding *tibia*—funeral *tuba*, a sorrowful trumpet emerges in
Elegy 2.13b by Propertius (1-6):

> quandocumque igitur nostros mors claudet ocellos,
>   accipe quae serves funeris acta mei.
> nec mea tunc longa spatietur imagine pompa,
>   nec tuba sit fati vana querela mei;
> nec mihi tunc fulcro sternatur lectus eburno,
>   nec sit in Attalico mors mea nixa toro.

The poet imagines his own funeral as a modest one. He renounces all tokens
of ostentatious rites, such as a long procession, trumpet music or a lavish bier.
Vana querela fati tuba denotes, on the one hand mournful tunes, while on the
other, it is a symbol of vain and extravagant praise of the deceased, just as
in the case of Claudius and Trimalchio. Notably, the passage displays a rare
instance of an association between the *tuba* and *querela*, which was usually
linked with the *tibia*.[47]

Conclusions

The motif contrasting the funeral trumpet with the wedding *tibia* is innova-
tive in the sense that it redefines the role and character of the funeral trumpet
for the sake of elegiac conventions. Whereas the close relationship between
the *tibia* and Roman elegy harkens back to performative practices of various
Greek elegiac forms, the employment of the tuba in an elegiac context is un-
precedented. In the Propertian and Ovidian rendition the new musical motif is
embedded within the well-established epigrammatic *topos* contrasting analo-
gous elements of wedding and funeral rites, and it emerges as that motif's most
prominent feature. Obviously, a trumpet is not juxtaposed with the *tibia* due to
its melodic potential, being otherwise depicted as a signal instrument, but be-
cause of its association with funerals, which proves a valuable means of provid-
ing opposition to the native wedding imagery of the two elegies. Owing to its
newly acquired mournful character, the trumpet not only becomes an elegiac
instrument in its own right, but also a genuine symbol of Roman/Etruscan her-
itage immersed in Greek tradition. Undoubtedly, literary motifs were forged in
such a manner in order to assist in the reinvention of Greek genres on Roman
soil, and to promote cultural contexts familiar to Roman readers.

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47   E.g., Lucr. 4.584, 5.1384; cf. Prop. 4.3.20.

Acknowledgments

Bibliography

Aloni, A. (2001). The Proem of Simonides' Plataea Elegy and the Circumstances of Its Performance. In: D. Boedeker and D. Sider, eds, *The New Simonides: Contexts of Praise and Desire*, Oxford: Oxford University Press, pp. 88-105.

Allen, A. (1992). Propertius 2.7 on Love and Marriage. *AJPh* 113.1, pp. 69-70.

Anderson, W.D. (1966). *Ethos and Education in Greek Music. The Evidence of Poetry and Philosophy*. Cambridge, Mass.: Harvard University Press.

Banti, L. (1973). *Etruscan Cities and Their Culture*. Berkeley/Los Angeles: University of California Press.

Bessone, F., ed. (1997). *P. Ovidii Nasonis Heroidum Epistula. XII, Medea Iasoni*. Firenze: Felice Le Monnier.

Brendel, O.J. (1978). *Etruscan Art*. New Haven/London: Penguin Books, Ltd.

Cairns, F. (2007). Propertius on Augustus' Marriage Law (II, 7). In: F. Cairns, *Papers on Roman Elegy 1969-2003*, Bologna: Pàtron Editore, pp. 141-55.

Davis, G. (2007). From Lyric to Elegy: The Inscription of Elegiac Subject in *Heroides* 15 (Sappho to Faon). In: W.W. Batstone and G. Tissol, eds, *Defining Genre and Gender in Latin Literature: Essays Presented to William S. Anderson on His Seventy-Fifth Birthday*, New York: Lang, pp. 175-91.

Day, J.W. (1989). Rituals in stone: early Greek grave epigrams and monuments. *JHS* 59, pp. 16-28.

Esteve-Forriol, J. (1964). *Die Trauer- und Trostgedichte in der römischen Literatur, untersucht nach ihrer Topik und ihrem Motivschatz*. München: A. Schubert.

Faraone, C.A. (2008). *The Stanzaic Architecture of Early Greek Elegy*. Oxford: Oxford University Press.

Farrell, J. (2012). Calling out the Greeks: Dynamics of the Elegiac Canon. In: B.K. Gold, ed., *A Companion to Roman Love Elegy*, Malden, Mass.: Wiley-Blackwell, pp. 11-24.

Fedeli, P. (2005). *Properzio. Elegie, Libro II. Introduzione, testo e commento*. Cambridge: Francis Cairns.

Flach, D. (2011). *Sextus Propertius: Elegien. Kommentar.* Darmstadt: WBG.

Fleischhauer, G. (1978). *Musikgeschichte in Bildern: Etrurien und Rom.* Leipzig: VEB.

Gale, M.R. (1997). Propertius 2.7: Militia Amoris and the Ironies of Elegy. *JRS* 87, pp. 77-91.

Garner, R.S. (2011). *Traditional Elegy. The Interplay of Meter, Tradition, and Context in Early Greek Poetry*. Oxford: Oxford University Press.

Gold, B.K., ed. (2012). *A Companion to Roman Love Elegy*. Malden, Mass.: Wiley-Blackwell.

Hagel, S. (2010). *Ancient Greek Music. A New Technical History*. Cambridge: Cambridge University Press.

Harrison, S.J. (2007). *Generic Enrichment in Vergil and Horace*. Oxford: Oxford University Press.

Heinze, T. (1997). *P. Ovidius Naso, Der XII. Heroidenbrief: Medea an Jason. Einleitung, Text und Kommentar*. Leiden/New York/Köln: Brill.

Hersch, K.K. (2010). *The Roman Wedding. Ritual and Meaning in Antiquity.* Cambridge: Cambridge University Press.

Heyworth, S.J. (2007). *Cynthia. A Companion to the Text of Propertius*. Oxford: Oxford University Press.

James, S.L. (2003). *Learned Girls and Male Persuasion*. Los Angeles, California: University of California Press.

Jannot, J.R. (1988). Musiques et musiciens étrusques. *Comptes-rendus des séances de l'Académie des Inscriptions et Belles-Lettres*, 132.2, pp. 311-34.

Jannot, J.R. (1994). Musique grec et musique étrusque: les raisons d'une dissemblance. In: A. Bélis, C. Homo-Lechner, eds, *La Pluridisciplinarité en Archéologie Musical*. Paris: Ed. de la Maison des sciences de l'homme, pp. 65-81.

Joncheray, C. (2010). *Les cités étrusques et le monde grec à la période classique*. Unpublished thesis. Università di Bologna, Université de Paris Ouest-Nanterre-La Défense.

Karakasis, E. (2011). *Song Exchange in Roman Pastoral*. Berlin: De Gruyter.

Landels, J.G. (1999). *Music in Ancient Greece and Rome*. London/New York: Routledge.

Lawergren, B. (2007). Etruscan musical instruments and their wider context in Greece and Italy. *Etruscan Studies. Journal of the Etruscan Foundation* 10, pp. 119-38.

Lowrie, M. (1997). *Horace's narrative "Odes"*. Oxford: Clarendon Press.

Mathiesen, T.J. (1999). *Apollo's Lyre. Greek Music and Music Theory in Antiquity and the Middle Ages*. Lincoln/London: University of Nebraska Press.

Oakley, J.H., and Sinos, R.H. (1993). *The Wedding in Ancient Athens*. London, Wisconsin: The University of Wisconsin Press.

Smith, P.L. (1970). Vergil's Avena and the Pipes of Pastoral Poetry. *TAPhA* 101, pp. 497-510.

Spivey, N. (1997). *Etruscan Art.* London: Thames and Hudson.

Tsagalis, C.C. (2008). *Inscribing Sorrow: Fourth-Century Attic Funerary Epigrams*. Berlin/ New York: De Gruyter.

Turcan, R. (1963). Le roman « initiatique »: à propos d'un livre récent. *RHR* 163.2, pp. 149-99.

West, M.L. (1974). *Studies in Greek Elegy and Iambus*. Berlin: De Gruyter.

West, M.L. (1992). *Ancient Greek Music*. Oxford: Clarendon Press.

Wille, G. (1967). *Musica Romana. Die Bedeutung der Musik im Leben der Römer*. Amsterdam: Schippers.

Wypustek, A. (2013). *Images of Eternal Beauty in Funerary Verse Inscriptions of the Hellenistic and Greco-Roman Periods*. Leiden/Boston: Brill.

BRILL

Musical Themes and Private Art in the Augustan Age

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Abstract

Some musical themes represented in *terra sigillata* reflect the political propaganda of the Augustan regime, as in the presence of Apollo *citharoedus*, of Sirens and of Hercules with the Muses. This visual repertory shares many features with the Augustan poets (especially the elegists) and with other private art of the Augustan period. Arretine ware potters often included Dionysiac, symposiastic and erotic scenes in their repertory, moving well beyond Augustus' official program. They recall formal and cultural models of the Hellenistic era.

Keywords

Following the victory at Actium in 31 BC and his assumption of absolute power, Augustus launched a program of cultural and moral renewal and a return to traditional religion: Paul Zanker has masterfully shown how he promoted this program using art and architecture and the development of a figurative language which had a strong impact on Roman society.[1]

This aspect of Augustan propaganda can be seen in the iconography of both public art, such as architecture and coins, and the objects and decorations intended for the private sphere, such as frescoes and mosaics, silver and terracotta vessels, cameo glass and gems. At times, musical figurative themes were

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1 Cf. Zanker 1989, 7-36.

used not only for decorative and artistic purposes but also for political propaganda. This paper examines the role that musical themes might have played in Augustan propaganda, as exemplified by different types of private art, especially *terra sigillata* or Arretine ware:[2] a survey of this imagery reveals that while Arretine ware largely reflects iconographic and cultural models from the Hellenistic period, in some scenes, such as portrayals of Apollo, artists responded to the Augustan program of visual propaganda described by Zanker. Also under consideration will be how musical imagery on *terra sigillata* reflects the iconography of other art forms in the Augustan age.

1   Apollo *citharoedus*

In the general program of moralization and restoration of social order and religious tradition (*pietas*) advanced by Augustus, Apollo became the official divinity of the Roman empire. Moreover, Augustus credited Apollo with his victory at Actium and adopted him as his patron divinity. Not surprisingly, therefore, Apollo plays an important role in both literature and public and private art of the Augustan age. In these portrayals, Apollo is often associated with music. The epiphany of Apollo during the battle, mentioned by Virgil and Propertius,[3] finds its visual correspondence in the 'Medinaceli reliefs', a marble frieze found in Campania and depicting meaningful events of Augustus' life (cf. Figure 1B).[4] Here Apollo overlooks the battle of Actium while sitting on a rock and holding a *cithara*, with a tripod next to him (cf. Figure 1A).[5]

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2   *Terra sigillata* or Arretine ware was a mass-produced fine pottery decorated by molds (*sigilla*) and produced from about 30 BC to 60 AD by several workshops around Arezzo (*Arretium*), a town in central Italy. Arretine ware was generally considered a 'poor man's' version of costly vessels made of precious metals that had inspired the production of their terracotta counterparts. In this paper, we deal with iconographic motifs depicted in the *terra sigillata* of Augustan age, but without details of the production of each workshop.

3   Cf. Verg. *Aen.* 8.675-706; Prop. 4.6.26-68.

4   Budapest, Szepmuveszeti Museum, 4817.1. The other fragments belonging to this cycle (second quarter of the first century AD) are included in two Spanish private collections: Madrid, collection of the Duchess of Cardona; Seville, Casa de Pilatos (cf. La Rocca *et al.* 2013, 321-3).

5   Probably this image of Apollo also refers to the ancient sanctuary devoted to the god (Apollo *Actius*) located in the Actium promontory. In other fragments belonging to different scenes of the same representations, some players of the *tuba* (*tubicines*) and the *tibiae* (*tibicines*) are taking part in two solemn processions: Budapest, Szepmuveszeti Museum, 4817.2.

FIGURE 1A   *Apollo overlooking the Actium battle. 'Medinaceli reliefs', detail. Budapest,*
             Szepmuveszeti Museum, 4817.1.

FIGURE 1B   *Apollo overlooking the Actium battle. Drawing showing a scene of the 'Medinaceli*
             reliefs' (from La Rocca et al. *2013, 321).*

Apollo *Actiacus* was portrayed several times in official art, such as in a *de-narius* of C. Antistius Vetus (16 BC), in which the god, holding a *cithara* and a *patera*, stands on a *podium* decorated with the *rostra* of Antony's ships.[6] The presence of the *cithara* in these images instead of the bow, traditionally de-picted in the hands of Apollo, underlines the god's new role: he was no longer

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6   Silver *denarius* of C. Antistius Veto, München, Staatliche Münzensammlunng. Cf. Zanker
    1989, 91, fig. 68.

an archer avenger but rather the god of peace, conciliation and culture.[7] Two passages from Propertius indicate this change. In his fourth book, Propertius claims, "I have sung enough of war: victorious Apollo now demands his *cithara*, and doffs his armour for dances (*choros*) of peace" (Prop. 4.6.69f.; transl. G.P. Goold). Earlier in his work, Propertius suggests that the cult statue of the god in the great temple on the Palatine that Augustus had dedicated to him— which may have been a work of Scopas—represented the god playing the *cithara*: "Here I thought that Phoebus' statue was fairer than Phoebus himself, as he sang with silent lyre (*tacita carmen hiare lyra*) and parted lips of marble […]. Then between his mother and his sister the god of Pytho himself, wearing a long cloak, plays and sings (*sonat*)" (Prop. 2.31.5f. and 15f., transl. G.P. Goold).[8]

Consistent with these portrayals in literature and visual art, *Apollo citharoedus* appears on a number of *terra sigillata* works. An iconographic theme often represented in Arretine ware was a person playing music next to a central object, such as a tripod, an altar, a *thymiaterion* (incense-burner). Sometimes the object is an *omphalos,* the stone symbolizing the temple of Apollo at Delphi. Among the most common characters in such scenes are Apollo *citharoedus* and a Victory pouring a libation on an altar, as we can see in a mold belonging to the collections of the Boston Museum of Fine Arts (cf. Figure 2).[9] Instead of Nike, we sometimes find winged *genii* playing the *cithara* or the double *tibiae*, as in another mold from Boston, also showing a satyr and a maenad playing music and dancing.[10] The same iconographic scheme occurs in the scenes portrayed in some architectural elements, such as the Campana reliefs that decorated the walls of sumptuous private and public buildings[11] and some marble bas-reliefs in the neo-Attic style (cf. Figure 3).[12]

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7   Cf. Gagé 1955, 499-522.

8   See also Miller 2009, 235f.

9   Boston, Museum of Fine Arts, 98.867 (Augustan age). Cf. Chase 1916, 28-30.

10   Boston, Museum of Fine Arts, 04.20 (Augustan age). Cf. Chase 1916, 31-3, no. 2.

11   London, British Museum, 1805,0703.333 (50 BC-25 AD): cf. Rohden-Winnefeld 1911, 17f., fig. 24. Other Campana reliefs showing these scenes are listed by Rohden-Winnefeld 1911, 17-19, figs 24-27 and pls 111.2.3 ('Kitharodenreliefs'); and Simon 1981, no. 350. In the following examples the *omphalos* is replaced by an altar: Paris, Louvre, Mr 749 (Ma 964; first century BC); Villa Albani, 1014 (Augustan age). Cf. Simon 1981, no. 351. The *cithara* depicted in these scenes has a shape very similar to the ones represented in Attic pottery, in line with the neo-Attic style of these works.

12   In some examples of the Augustan age, Apollo *citharoedus* is facing Nike near the *omphalos*: Cleveland Museum of Art, Purchase from the J.H. Wade Fund, 1930.522 (cf. Simon 1981, no. 349); Paris, Louvre, Mr 866 (Ma 965).

FIGURE 2 *Apollo* citharoedus *and a Victory pouring libation on an altar. Fragment of a mold for a bowl. Boston, Museum of Fine Arts, 98.867 (Augustan age).*

FIGURE 3 *Apollo* citharoedus *and a Victory pouring libation. Marble Relief. Cleveland Museum of Art, Purchase from the J.H. Wade Fund, 1930.522 (from Simon 1981, no. 349).*

2   Sirens

Even where Apollo is absent, *terra sigillata* sometimes reflect Augustan pro-
paganda. Another series of scenes shows two winged characters playing musi-
cal instruments with a tripod between them: the pattern is very similar to the
scenes with Apollo facing Nike or the winged *genii* mentioned above, but their
tail and the bird-like feet allow us to interpret them as Sirens (cf. Figure 4).[13]

    The shape of their tails is very similar to an acanthus leaf, which has a strong
evocative meaning. In fact, acanthus branches and, more generally, leafy
branches are widespread in Augustan art, most famously in the reliefs on the
Ara Pacis. They symbolize happiness, divine blessing and the *saeculum aureum*
that began under Augustus. Their tails remind us of the Sirens' monstrous na-
ture, now subdued by the order re-established by Augustus.[14] The Sirens have

FIGURE 4   *'Siren' playing* tibiae. *Fragment of a mold for a bowl. Boston,
               Museum of Fine Arts, 98.831.*

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13   Boston, Museum of Fine Arts, 98.831. Cf. Chase 1916, 51.
14   Cf. Pietra 2013.

lost their power of seduction and ambiguous fascination, and, defeated by
Apollo, are now honoring him. These scenes are, as we would expect in mold-
ed decoration, schematic and repetitive. Nevertheless, they reflect Augustan
political propaganda, with their allusion to the wild, corrupt and arrogant
enemies of the *princeps.* In this perspective, we can also interpret the scene
illustrating Marsyas defeated by Apollo engraved by Dioskourides, Augustus'
official engraver, on a famous carnelian gem belonging to the collection of
Lorenzo de Medici.[15]

3   Hercules and the Muses

The visual repertoire that inspired the Arretine ware potters was very eclec-
tic and strongly influenced by the themes from Alexandrian art and from late
fourth-century Greek art. Several vessels, for example, show Hercules and the

FIGURE 5
Muses. Fragment of a mold for a bowl.
Arezzo, Museo Archeologico Nazionale,
8769 (from Pucci 1981, 102f., figs 4f.).

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15   Naples, Museo Archeologico Nazionale, n. 213, inv. 26051 (Dioskourides). Cf. Castaldo
      2009, 68.

Muses (cf. Figure 5).[16] Some of the characters in these scenes were inspired by the Muses on the fourth-century Mantineia Base, which shows the musical contest between Apollo and Marsyas.[17] Inspiration also probably came from sculptures of the Muses brought to Rome from Ambracia by the consul Fulvius Nobilior in 187 BC and placed in the temple of *Hercules Musarum*.[18]

However, Hercules is seldom shown with the Muses on Arretine ware; it has been argued that these scenes were created by potters of Perennius Tigranus' workshop active in Arezzo at the time of Augustus and that Hercules and the Muses, like Apollo, allude to the victory of Actium.[19] Similarly, another subject with a political meaning was invented by the potters: the procession following Hercules and Omphale on a chariot drawn by centaurs. These scenes reflect Augustan propaganda, this time in opposition to Augustus' main enemy, as they are an open allusion to the marriage between Antony and Cleopatra, to Antony's love for oriental luxuries and to Antony's identification with Dionysus.[20]

4   Dionysiac Themes

Although Augustan official art had a tendency to exclude themes related to Dionysus because of their association with Antony, the characters, objects and musical instruments belonging to the Dionysiac sphere are widespread in private art.[21] While Augustan public art reflected what were thought to be the civic and religious values of the Archaic Roman Republic by adopting Classical Greek formal models, within the private sphere, wealthy and cultivated Romans ordered for their houses objects and decorations depicting themes from the Hellenistic repertoire. These included Dionysus and his *thiasos* and related theatrical and pastoral topics.

For example, in the fine production of cameo glass that flourished in Italy during the Augustan Age, Dionysiac themes were among those most often represented, as we can also see on the famous 'Blue Vase' from Pompeii, with some

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16   Arezzo, Museo Archeologico Nazionale, 4931, 8768, 8769, 8771, 87777. Cf. Marabini Moevs 2006a, figs 6, 8, 13, 15.

17   Athens, National Museum, 215-7 (330 BC); School of Praxiteles.

18   Arezzo, Museo Archeologico Nazionale, 8769. Cf. Marabini Moevs 1981, 119f., figs 35-39; Pucci 1981, 102f.

19   Cf. Marabini Moevs 2006a, 116-9.

20   E.g. Arezzo, Museo Archeologico Nazionale, 5596. Cf. Zanker 1989, 63-6; Marabini Moevs 2006a, 107-11.

21   Regarding the identification of Antony with Dionysus, see Zanker 1989, 62-67; Barcaro 2010, 99-136.

FIGURE 6   *Satyrs treading on grapes in a wine-press. Campana*
Reliefs, London, British Museum, 1893,0628.6.

Erotes pressing grapes and playing the *syrinx* and the *tibiae.*[22] The subject of satyrs making wine to the rhythm of music is also among the most frequent in the terracotta Campana reliefs, as we can see in an example from the British Museum in which two satyrs are treading on grapes in a wine-press while another, on the left, plays the *tibiae* (cf. Figure 6).[23]

This iconographic model was widespread, although the musician is sometimes shown playing the *Phrygian tibiae* instead of 'regular' ones[24] or beating the rhythm with the *scabellum.*[25] Arretine ware shows the same fondness for Dionysiac themes evident in other private art: the potters sometimes represent satyrs treading on

22   Cameo glass amphora vase ('Blue Vase'), Naples, Museo Archeologico Nazionale, inv. 13521 (first century BC). Cf. Harden 1988, 70f.

23   London, British Museum, 1893,0628.6 (Augustan Age). Cf. Rohden-Winnefeld 1911, 65, pl. 15; Rauch 1999, 647.

24   A type of *tibia* consisting of two pipes, one straight and the other terminating in an upturned conical bell (cf. Bélis 1986).

25   London, British Museum, 1805,0703.336. Cf. Von Rohden and Winnefeld 1911, 65; Rauch 1999, 676. See also Von Rohden and Winnefeld 1911, pls 125f. The *scabellum* was a clapper consisting of two pieces of wood attached to the foot, used by the musician (usually a *tibicen*) to beat the rhythm. This type of clapper is not represented frequently and visual evidence shows that it was played by satyrs of the Dionysiac *thiasos*, but also by professional

grapes, even if the iconographic pattern does not include musical elements,[26] and satyrs and maenads dancing while playing the *tibiae* and *tympanum*.[27]

5 Symposium

Some scenes on bowls showing characters dancing might be linked to the symposium, since this type of vessel was mainly used during banquets. The frieze on an Arretine ware mold shows a *tibicen* with *scabellum* and five characters dancing. A girl is playing a triangular harp and the others are playing *crotala* (clappers) with their arms raised over their heads (cf. Figure 7).[28] Some texts link the harp with banquets. For example, according to Livy the consul Manlius Volso, returning from his victories in Asia, brought back to Rome all kinds of exotic oriental luxuries, including harps: "female players of the harp and the *sambuca* and other festal delights of entertainment were made adjuncts to banquets; the banquets themselves, moreover, began to be planned with both greater care and greater expense" (Liv. 39.6.4, transl. E.T. Sage).[29] Representations of a woman playing the harp are not very common in the Roman world and the extant examples, mostly coming from the Near East, seem to hint at the symposium.[30] Two terracotta statuettes from Myrina show harpists. In one, the harpist is dancing. In the other two, banqueters are reclining on a couch with a harp player (cf. Figure 8).[31]

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musicians in dance scenes during popular entertainment, such as mime and pantomime. Cf. Bélis 1988.

26   See the examples from Boston, Museum of Fine Arts, 98.837, 98.839, 04.24, 01.8116. Cf. Chase 1916, 45-9, nos 21-4.

27   Boston, Museum of Fine Arts, 04.20 (Augustan age). Cf. Chase 1916, 31-3, no. 2.

28   Fragments of a mold, Boston, Museum of Fine Arts, 08.530; 98.849. Cf. Chase 1916, 73 (Augustan age). Mold of bowl, 04.34, 04.35. Cf. Chase 1916, 67.

29   *tunc psaltriae sambucistriaeque et convivialia* [*alia*] *ludorum oblectamenta addita epulis; epulae quoque ipsae at cura et sumptu maiore apparari coeptae.* At the end of the fourth century AD, Augustine (*De ciu. D.* 3.21.17) still remembered this episode: "Then harp girls were introduced into the banquets, as well as other licentious profligacies (tunc inductae in conuiuia psaltriae et alia licentiosa nequitia)".

30   A musician playing a triangular harp is also entertaining the banqueters in a section of the "Nile mosaic" of Palestrina (second-first century BC): Palestrina, Museo Archeologico Prenestino. See Versluys 2002, 52-4.

31   Paris, Louvre, Myr 661 and 272, from Myrina (first century BC). In another example from Sicily, the dancer is holding a harp which is not angular but has a round frame: Los Angeles, J. Paul Getty Museum, inv. 73.AD.151 (third-second century BC). Cf. Ferruzza 2016, 192-195, cat. 55 ("Statuette of a woman with *kithara*"). Antonio Canova, in the painting *Dancer with Hands on Hips as Terpsichore Surrounded by Two Amours and Euterpe*

FIGURE 7
Dancing scene. Mold of a cover. Boston,
Museum of Fine Arts, 04.35.

FIGURE 8
Harpist with banqueters. Terracotta
statuette. Paris, Louvre, Myr 272.

Another statuette showing a harpist was found at the site of Yavneh-Yam, Israel, together with several vessels intended for the banquet: in this case, the archeological context seems to support the visual evidence.[32] The iconography of a

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       (1799—Possagno, Museo e Gipsoteca Canova, 118), shows a Cupid dancing while play-
       ing the angular harp. He was probably inspired by a fresco recently found at Pompeii or
       Herculaneum: cf. Ferrari-Barassi 2015, 54, fig. 11.

32   Tel Aviv University, Institute of Archaeology, inv. no. YY92-103-1009 #7 (between second
       and first century BC). Cf. Fischer 2003.

woman playing a triangular harp (*trigonon*) was widespread throughout the Mediterranean world during the Hellenistic Age, especially in Alexandrian art. It is likely, therefore, that Roman artisans introduced this theme, taking inspiration from Hellenistic art.

The symposium scene showing a couple reclining on a couch is one of the best documented in Arretine ware, and it very often includes musical details, especially stringed instruments. A mold from the Boston Museum includes four couches, each showing a man and a woman. On two of the couches, the woman is holding a lyre. A boy is glancing at one of the couples from behind a half-open door. Also shown are two flying Cupids and a wreath (cf. Figure 9).[33] In other variations of this scene, a *cithara* hangs on the wall near the couple or between two of the couches, sometimes together with a *syrinx*, but neither instrument is ever played by one of the banqueters (cf. Figure 10).[34]

FIGURE 9   *Scene of a symposium with lyre. Mold for a bowl. Boston, Museum of Fine Arts, 04.23 (from Marabini Moevs 2006b, fig. 1).*

33   Boston, Museum of Fine Arts, 04.23. Four groups of youths and women: cf. Chase 1916, 57-59, no. 034. See also some examples in Arezzo: cf. Porten Palange and Troso 2011, 15f., figs 23f. (Coll. Stenico).

34   Boston, Museum of Fine Arts, 04.22. Symposium of four pairs of youths and women: cf. Chase 1916, 59, no. 035.

FIGURE 10   *Scene of a symposium with* cithara *and* syrinx. *Mold for a bowl. Boston, Museum of Fine Arts, 04.22.*

The presence of these musical details is consistent with the theme of the symposium, during which music and songs were usually performed, both by the banqueters themselves and by professional musicians, mostly women. The *cithara*, which in classical Greece was used in public performances, appeared often in the private sphere after Hellenistic times, usually being played by women.[35]

Augustan love elegy, which also moved well beyond and even rejected Augustan propaganda, provides an analogy for these scenes focusing on wine, love and music as pleasures of the banquet. In both visual portrayals and elegies, the musical instruments may allude to musical skills as a necessary complement to women's erotic attractiveness.[36] Thus we find in Propertius, for example: "Nor it is so much her face that has ensnared me, fair though it be … nor her hair falling attractively over her smooth neck, … nor when my girl shimmers in silks of Araby (I am no lover who flatters for no reason) … as much as the fact that, after the wine is put out, she dances as beautifully as ever Ariadne leading her frolic maenads, and when she attempts songs on the

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35   See for example the fresco from the Hagios Athanasios (Thessaloniki) tomb (end of the fourth century BC) and several terracotta figurines from Greece and Magna Graecia: among them the group of six female musicians, including two musicians playing two different types of *cithara* ('Aegina concert group': Paris, Louvre, CA 798-799; from Aegina, 250-225 BC). In the literary text, see Xen. *Symp.* 2.2 (the musician is a boy). Cf. Castaldo forthcoming 2017.

36   Hor. *Carm.* 2.11.21-24, 3.9.9f., 3.15.13f. (a girl unskilled in music), 4.13.5-7; Prop. 1.2.25.

Aeolian lyre (*Aeolio cum temptat carmina plectro*), gifted to compose something fit for Aganippe's lyre (*ludere docta lyrae*), and when she pits her writings (*scripta*) against those of ancient Corinna and deems Erinna's poems (*carmina*) no match for her own" (Prop. 2.3.9, transl. G.P. Goold). These poets celebrate love and passion, which, in turn, inspire their poetry: "It is not Calliope, not Apollo that puts these songs in my mind … if with ivory fingers she strikes the melody of the lyre (s*ive lyrae carmen digitis percussit*), I marvel how skilfully she applies her easy touch; or if she lowers eyelids that fight against sleep, the poet in me finds a thousand new concepts" (Prop. 2.1.5, transl. G.P. Goold).[37]

These themes of Roman elegy, which find several visual correspondences in the images on *terra sigillata*, reflect Hellenistic practices. The association of beloved women with music is one of the main topics of Alexandrian epigrams.[38] For example, Philodemos combines musical skill and erotic attractiveness as he praises his love: "Xanthippe's strum on the harp (ψαλμός), her talk, her speaking eyes, her song (ᾠδή) […] and the fire just alight will set you aflame, my heart" (Mel. *AG* 5.131).[39] He also associates the music of the harp with revelry (*komos*): "Already, Xanthippe, my head is sprinkled with grey hair, messengers of the age of wisdom. But still I care for the speaking music of the harp and the revelry (ψαλμός τε λάλος κῶμοί τε μέλονται)" (*AG* 11.41). Leonidas, speaking about two *aulos* players, Melo and Satyre, who dedicated their instruments to the Muses, also relates the *syrinx* to the banquet: "Melo and Satyre […] now advanced in age, the Muses' pliant workwomen, made dedications to the Pimpleian Muses. Melo dedicated her swift-lipped auloi (τοὺς ταχυχειλεῖς / αὐλούς) and this boxwood *aulos*-case (αὐλοδόκην), and amorous Satyre dedicated the reeds (δόνακα) that she daubed with wax, with which she accompanied wine drinkers in their evening revels, a sweet whistler (ἡδὺν συριστῆρα)" (*AG* 5.206, transl. W.R. Paton and M.A. Tueller). Notable here is the presence of the *syrinx*, seldom shown at banquets in other literary or visual sources but included, as we saw above, on some Arretine vessels depicting symposium scenes.[40]

The musical elements of the symposium portrayed on the Arretine ware thus echo both Augustan elegy and Alexandrian poetry. They do not, however, appear in other visual evidence from the Augustan period. Several

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37 In some passages, *tibiae* are also cited, not to accompany the songs but to give rhythm to the dances: Prop. 3.10.23.

38 See, e.g., Yardley 1991; Marabini Moevs 2006a, 122-4; 2006b.

39 See also *AG* 5.139, 201, 222.

40 E.g. the mold of Boston 04.22 cited above (n. 34).

representations of symposia have been found at Pompeii and Herculaneum:[41] we can mention, for example, the set of frescoes decorating some rooms of the *House of the Chaste Lovers* (first century AD), among them the *triclinium*, the room devoted to the banquet.[42] These works include some features found in *terra sigillata*, including banqueters reclining on individual couches.[43] Nevertheless, the painters have updated the traditional model through the introduction of some elements of contemporary life, such as the silverware used for pouring and drinking wine. The only reference to music in these works is not visual but written: in one of the pictures from the *House of the Triclinium* (first century AD), the painter wrote the words spoken by the banqueters, among them the phrase "I am singing" (*ego canto*).[44]

6   Erotic Scenes

Arretine ware also shows the lyre and the *cithara* in erotic scenes, a theme which seems closely related to the banquet. In a mold from the Boston Museum, lyres and *citharai* are hanging on the wall, separating the couches on which the couples are making love. The same pattern, as we saw above, occurs in the symposium scenes where the characters are banqueting.[45] The presence of music in these erotic scenes mirrors the strong connection between music and eros, well documented in poetry and in examples from other visual arts, such as the famous Warren Cup from the ancient town of Betar (the modern Battir) in Palestine (cf. Figure 11A and 11B).[46]

On both sides of the cup, in low relief, two males are shown in a sexual act. On one side, a boy is glancing at the couple from behind a half-open door, much like the boy in the symposium scene on the mold from Boston described

41   For a complete list see Dunbabin 2003, 52-71.

42   Pompeii, *House of the Chaste Lovers* (IX. 12. 6) Dunbabin 2003, pl. 1, fig. 26, *triclinium*; Naples, Museo Archeologico Nazionale, 024; Dunbabin 2003, pl. 3; a third fresco is lost: cf. Dunbabin 2003, 220 n. 48.

43   This iconography was already represented in Greek pottery.

44   *House of the Triclinium*, Naples, Museo Archeologico Nazionale, 120031. *CIL* 4.3442. Cf. Dunbabin 2003, 58f.

45   Mold, Oxford, Ashmolean Museum, 1966.252. Cf. Brown 1968, 6, pl. 3.

46   London, British Museum, 1999,0426 (60 BC-9 AD). The cup is called "Warren" from the name of the most famous owner, Edward Perry Warren. See Williams 2006 and 2015 for a detailed discussion of the previous bibliography.

above.[47] On the left, an eleven stringed *cithara*, similar to the ones represented in Arretine vessels, is set in an open chest and it is separated by drapery from the double *tibia* hanging on the wall. *Tibiae* are less frequently represented in *terra sigillata*, where they are always played by some character. The images on the Warren Cup point to a cultured, Hellenized elite setting, where the *cithara* and the *tibiae* can be viewed as symbols of Greek musical skills and culture. Due to their conspicuous and symmetrical position, they may also be interpreted as a figurative way to move from one side of the cup to the other. Refined silver vessels like the Warren Cup, often belonging to drinking sets that included several items (see e.g. the set from Boscoreale), are not rare at the beginning of the empire: they were luxury objects intended for the upper classes, who appreciated them both for their precious metal and for the care the artisans took in their figured decoration.[48] Silver vessels were a means for the owners to reinforce their self-identity and social standing as a Roman, but also to

FIGURE 11A
Warren Cup. London, British Museum, 1999,0426.

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47   Boston, Museum of Fine Arts, 04.23 (see n. 33). See also Arezzo, Museo Archeologico Nazionale, 75839. Cf. Marabini Moevs 2006a, 122, fig. 43.

48   See the fascinating hypothesis of Dyfri Williams that the owner of the cup could have been a member of the Hellenized and Romanized elite of Betar, such as a Roman officer stationed there, who hid the precious object when faced with the imminent first Jewish Revolt (66-74 AD). Cf. Williams 2015, 181.

FIGURE 11B   *Warren Cup. London, British Museum, 1999,0426 (detail).*

display their wealth and culture: their decorations, especially the most refined, were intended to evoke admiration and discussions at the drinking party and to invite exhibitions of culture from the assembled guests.

The musical images shown in *terra sigillata* are thus clear representatives of their age. In some respects they reflect the propaganda of the Augustan regime, as in the presence of Apollo *citharoedus*, of Sirens with tails that look like acanthus leaves, and of Hercules with the Muses. In thus responding to the artistic program of Augustus, the potters acted much like the Augustan poets and many other creators of both public and private art. Like the Augustan authors (especially the elegists) and others artists creating objects for private purposes, however, makers of Arretine ware also moved well beyond Augustus' official program, reflecting tendencies that referred to the Hellenistic era. Hence we find Dionysiac, symposiastic and erotic scenes.

The imagery shown in *terra sigillata*, as in the other forms of private art we have mentioned, imply a familiarity with Hellenistic idioms, in terms of both style and iconography and cultural and social values. They accompanied the moments of cultured *otium* by the owner and his guests, the moments of Epicurean leisure and luxury, dominated by the Hellenizing scholarly pleasures of reading, writing, philosophical discussion and admiration of antique art, poetry and music.

Bibliography

Barcaro, A. (2010). *Dèi, eroi e comunicazione politica. Identificazioni religiose e ideologie leggendarie al crepuscolo della Repubblica*. Diss. Università di Venezia Ca' Foscari.

Bélis, A. (1988). Kroupezai, Scabellum. *BCH* 112, pp. 323-39.

Bélis, A. (1986). L'aulos phrygien. *RA* n.s. 1, pp. 21-40.

Brown, A.C. (1968). *Catalogue of Italian Terra-Sigillata in the Ashmolean Museum*. Oxford: Oxford University Press.

Castaldo, D. (2010). Eventi sonori in età augustea: una lettura iconografica. *Ocnus. Quaderni della Scuola di Specializzazione in Archeologia dell'Università di Bologna* 18, pp. 164-74.

Castaldo, D. (forthcoming 2017). *Musical Culture in Ancient South Italy: Interactions between Greece and Magna Graecia*. Uppsala: Astrom Editions.

Chase, H. (1916). *Catalogue of Arretine Pottery in the Museum of Fine Art*. Boston/New York: The Riverside Press Cambridge.

Dunbabin, C. (2003). *The Roman Banquet*. Cambridge: Cambridge University Press.

Ferrari-Barassi, E. (2015). Dance in Ancient Roman Representations, Canova's Works and Their Reproductions. *Music in Art* 40, pp. 45-78.

Ferruzza, M.L. (2016). *Ancient Terracottas from South Italy and Sicily in the J. Paul Getty Museum*. Los Angeles: The J. Paul Getty Museum.

Fischer, M. (2003). *A terracotta harp player from Hellenistic Yavneh-Yam* (*Israel*). In: E. Hickmann and R. Eichmann, eds, *Music-Archaeological Sources: Finds, Oral Transmission, Written Evidence*, Rahden: Leidorf, pp. 437-43.

Gagé, J. (1955). *Apollon romain*. Paris: Boccard.

Harden, B., ed. (1988). *Vetri dei Cesari, Catalogue of the Exhibition*. Milano: Olivetti.

La Rocca, E., *et al.*, eds (2013). *Augusto*. Catalogo della mostra. Milano: Mondadori Electa.

Lawergren, B. (2008). Angular Harps Through the Ages. A Causal History. In: A. Both, R. Eichmann, E. Hickmann and L.C. Koch, eds, *Challenges and Objectives in Music Archaeology*, Rahden: Leidorf, pp. 261-81.

Marabini Moevs, M.T. (1981). Le Muse di Ambracia. *BA* 12, pp. 1-58.

Marabini Moevs, M.T. (2006a). *Cosa: The Italian Sigillata*. Ann Arbor: The University of Michigan Press.

Marabini Moevs, M.T. (2006b). Symposium scenes of Augustan times and Alexandrian epigrammatic poetry. In: C.C. Mattusch, A.A. Donohue and A. Braue, eds, *Proceedings of the XVIth International Congress of Classical Archaeology. Common Ground: Archaeology, Art, Science and Humanities*, Oxford: Oxbow, pp. 176-80.

Marabini Moevs, M.T. (2008). Per una storia del gusto: riconsiderazioni sul Calice Warren. *BA* 146, pp. 1-16.

Miller, J. (2009). *Apollo, Augustus, and the Poets*. Cambridge/New York: Cambridge University Press.

Pietra, G. (2013). Le sirene di Marcus Perennius. Un vaso aretino da Carbonia. *Quaderni. Rivista di Archeologia* 24, pp. 303-13.

Porten Palange, F.P., and Troso, C. (2011). *La terra sigillata italica della collezione Stenico.* Roma: Bretschneider.

Pucci, G. (1981). *La ceramica aretina: "imagerie" e correnti artistiche*. In: X. Lafon and G. Sauron, eds, *L'art decoratif à Rome à la fine de la république et au début du principat, Table ronde de Rome (10-11 mai 1979)*, Rome: École Française de Rome, pp. 101-19.

Rauch, M. (1999). *Bacchische Themen und Nilbilder auf Campanareliefs*. Rahden: Leidorf.

Simon, E. (1984). Apollon/Apollo. Apollon in Rom und Italien. *Lexicon Iconographicum Mythologiae Classicae* 2.1, pp. 365-446.

Tortorella, S. (1981). Le lastre Campana. Problemi di produzione e di iconografia. In: *L'art decoratif à Rome à la fine de la république et au début du principat, Table ronde de Rome (10-11 mai 1979)*, Rome: École Française de Rome, pp. 61-100.

Versluys, M.J. (2002). *Aegyptiaca Romana. Nilotic Scenes and the Roman Views of Egypt.* Leiden/Boston: Brill.

Von Rohden, H., and Winnefeld, H. (1911). *Die Antiken Terrakotten im Auftrag des Archäologischen Instituts des Deutschen Reichs*, 4.1: *Architektonische römische Tonreliefs der Kaiserzeit*, Berlin/Stuttgart: Spemann.

Williams, D. (2006). *The Warren Cup*. London: The British Museum Press.

Williams, D. (2015). A Cantharus from ancient Betar near Jerusalem (the so-called Warren Cup) and Roman Silver Plate. *BABesch* 90, pp. 155-98.

Yardley, J.C. (1991). The symposium in Roman elegy. In: W.G. Slater, ed., *Dining in a Classical Context*, Ann Arbor: University of Michigan Press, pp. 149-55.

Zanker, P. (1989). *Augusto e il potere delle immagini*. Ital. transl. Torino: Boringhieri [German edition: München 1987].

BRILL

Ἀνωνύμου σύγγραμμα περὶ μουσικῆς (*Anonymi Bellermann*)

An Agglomeration of Five Musical Handbooks

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Abstract

In 1841, Friedrich Bellermann published two treatises about Greek music, the *Anonymi scriptio de musica* and *Bacchii senioris introductio artis musicae* (Bellermann 1841). While the second treatise belongs to some Dionysius, a Byzantine musicologist of the time of Constantine Porphyrogenetos (912-959; new edition Tertsēs 2010), the first treatise is an agglomeration of five musical handbooks (new edition Najock 1972 and 1975). The available manuscript tradition of the respective headings and the beginnings and the content of the different components make it possible to disentangle the alleged σύγγραμμα into its parts and to describe the original treatises accurately.

Keywords

handbook – Anonymi Bellermann – Bacchius – Aristoxenus

1 Introduction

The musical handbooks which Carl von Jan assembled in his famous *Musici scriptores Graeci* (Jan 1895) fall into several groups. There are Pythagorean treatises like Eucleides' Κατατομὴ κανόνος (Jan III) and Nicomachus' Ἐγχειρίδιον ἁρμονικῆς (Jan V). Also Pythagorean is the Τέχνη μουσική by some Dionysius, first published under the name of Bacchius by Bellermann (Bellermann 1841; Tertsēs 2010). Cleonides' Εἰσαγωγὴ ἁρμονική (Jan IV), an Aristoxenian treatise, is an example of the systematic treatise described by Fuhrmann (1960).

Gaudentius' Ἁρμονικὴ εἰσαγωγή (Jan VII) begins like an Aristoxenian sys-
tematic treatise, but also adopts Pythagorean doctrines. The original version
of Bacchius' Εἰσαγωγὴ τέχνης μουσικῆς (Jan VI) was an Aristoxenian system-
atic treatise, to which in Byzantine times a Pythagorean treatise and a trea-
tise about rhythmics were added.[1] This compilation was transformed into the
schoolbook set out in question and answer which we have.[2] The Εἰσαγωγὴ
Μουσική of Alypius (Jan no. VIII) claims a place for notation in a systematic
treatise along Aristoxenian lines.

2   *Anonymi Bellermann*

The last example of musical handbooks is the Ἀνωνύμου σύγγραμμα περὶ
μουσικῆς, which Friedrich Bellermann published in 1841. A new edition, based
on all of the available manuscripts, was prepared in 1972 in a doctoral the-
sis, and published in 1975 by Dietmar Najock (Najock 1972; 1975). Sources—
Aristoxenus, as a rule—are reported in this edition below the text, which does
not look like a selfcontained treatise, but appears to be an agglomeration of in-
dependent treatises with supplements, as it leaps to the eye at first glance. The
first treatise (§§ 1-11) of the alleged σύγγραμμα is repeated in §§ 83-93. Musical
notation is used in 1-11 and 66-104. §§ 97-101 and 104 transmit six instrumental
pieces. §§ 12-28 and 29-66 are different examples of a systematic treatise, as
they begin with the familiar definition of their subject, namely music. Another
treatise, which resembles the beginning of Alypius, consists of §§ 66-82.[3]
Therefore, the analysis of the σύγγραμμα must begin with the manuscript tradi-
tion of the respective headings if available, and the beginnings and the content
of its different parts.

3   *Anonymus* I (§§ 1-11) and *Anonymus* V (§§ 83-93)

The complete Ἀνωνύμου σύγγραμμα περὶ μουσικῆς is transmitted only as an
appendix to the third book of Aristides Quintilianus' *De musica*.[4] After the
subscriptio to this book, only in B (*Neapolitanus graecus* III C 4) appears

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1   Cf. Jan 1895, 285-90.
2   Ruelle (1875) published parts of Bacchius' handbook which are devoid of question and
    answer.
3   Cf. Jan 1871, 408ff.
4   Cf. Najock 1972, 62.

a new title, Τέχνη μουσικῆς, while in A (*Venetus Marcianus graecus app. Class.* VI 10) a line for the rubricator was left, who nevertheless omitted the title. C (*Florentinus Riccardianus graecus* 41) inserts only the *subscriptio* of Aristides Quintilianus. This means that the compiler of the archetype had already found in his source the title Τέχνη μουσικῆς for the entire Ἀνωνύμου σύγγραμμα, without the name of its author.

Of course, this title in no way covers the content of §§ 1-11 (= 83-93), which begins with a definition of rhythm: 1 = 83: "rhythm consists of arsis and thesis and the pause, which is called by some empty time" (ὁ ῥυθμὸς συνέστηκεν ἔκ τε ἄρσεως καὶ θέσεως καὶ χρόνου τοῦ καλουμένου παρά τισι κενοῦ). After that, the signs for quantities of two, three, four and five time-units come. It may seem puzzling that the respective signs for pauses (λεῖμμα) are lacking. They are lacking also in § 83, but appear without context at the end of the σύγγραμμα in § 102, as κενὸς βραχύς, κενὸς μακρός, κενὸς μακρὸς τρίς and κενὸς μακρὸς τετράκις.

A catalogue of eight possible melodic movements follows in § 2 = 84, which is illustrated by instrumental notation and signs for articulation like the *hyphen* (⏑), the *kompismos* (+) and the *melismos* (x). This catalogue is explained through more examples in §§ 4-10 = 86-93. The technique of presentation of the respective subject by a catalogue and after that by a specific treatment is familiar in the systematic treatise as described by Fuhrmann.[5]

In § 3 = 85, arsis and thesis, which were introduced in 1 = 83, are explained with the help of instrumental notes, which are in the case of the arsis equipped with the στιγμή, the so-called arsis-point, which introduces regular measure. Arrhythmic songs without στιγμή, λεῖμμα or signs for different time-lenghts are called κεχυμέναι ᾠδαί (coloraturas), and the corresponding instrumental music is called διαψηλαφήματα.

Finally, § 11 = 93 explains the διαστολή, a sign which, contrary to the *hyphen*, separates musical phrases. Such a sign appears in the manuscripts as /: or :-. Its correct form, resembling an inverted C, appears in Ptolemaic papyri (DAGM nrr. 3, 10, 14).

§§ 1-11 and their revised version in 83-93 have no sources in the ancient musical theory. Some items are treated also by Aristides Quintilianus, but not with the same terminology.[6] It is clear that the rhythmical principles of the treatise are Aristoxenian. It is also interesting that the revised version of the treatise in § 83 has the title Περὶ μελοποιΐας, which matches agreeably with the content.

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5   See Fuhrmann 1960, 17-22, 26-8.

6   Cf. Najock 1972, 192.

4   *Anonymus* II (§§ 12-28)

The following treatise begins with the heading Ὅρος μουσικῆς. As A and C have it in the text, B in the margin, the compiler of the archetype pointed to the beginning of a new treatise by this heading, which is possible for a handbook. Indeed, § 12 offers two definitions of music, the second of which reappears at the beginning of Anonymus III (29). A definition of the musician follows. § 13 divides music into six branches: harmonics, rhythmics, metrics, organology, poetics and acting, of which in §§ 14-8 the first four are described.[7] In § 30, *Anonymus* III divides music into the same branches, but in § 31 he deals only with harmonics. The preliminary definition of harmonics in § 14 is interesting: "it is crucial for harmonics, which is divided into fifteen keys, to distinguish the genera of the melodies" (τῆς μὲν ἁρμονικῆς εἰς τρόπους δεκαπέντε διαιρου μένης ἴδιον τὸ περὶ τῶν τῆς μελῳδίας γενῶν διαλαμβάνειν). This sentence, the beginning of which reappears at the beginning of *Anonymus* IV in § 66, does not match the traditional division of harmonics into seven parts, namely sounds, intervals, systems, genera, keys, modulation and melody-making. It is drawn by misunderstanding from Alypius, 367, 19-21 Jan, as we shall see below (p. 121 f.).

In §§ 19-20, *Anonymus* II returns to harmonics and lists now correctly the seven parts of it. In § 21, he compares the φθόγγος with the point in geometry, with the number one in arithmetic and with the letter in the alphabet, a notion which appears also in the excerpts of Nicomachus § 6, p. 276 f. Jan. After that, *Anonymus* II adds the Aristoxenian definition: "the sound is the fall of a melodic voice on a certain pitch" (καὶ ἔστιν ὁ φθόγγος ἐμμελοῦς φωνῆς πτῶσις ἐπὶ μίαν τάσιν. In § 22, he introduces διάστημα, in § 23, σύστημα.

In §§ 24-6, *Anonymus* II describes the three genera like Aristoxenus, using the tone, the half-tone and the quarter-tone, which he calls δίεσις following Aristoxenus. But as he curbs the three chromatic and the two diatonic genera in each case to one genus in § 24, an inconsistency results: "the tone is divided into two half-tones, but in the chromatic into three *dieses*, and in the enharmonic into quarter-tones" (ὁ τόνος διαιρεῖται εἰς ἡμιτόνια δύο καί ἐν μὲν χρώματι εἰς διέσεις τρεῖς, ἐν ἁρμονίᾳ δὲ εἰς τεταρτημόριον). In §§ 25-6, yet *Anonymus* II describes the διάτονον σύντονον (1/2, 1, 1), the χρῶμα σύντονον (1/2, 1/2, 1½) and the enharmonic (1/4, 1/4, 2) correctly. *Anonymus* III presents in § 53 the correct values (1/3, 1/3, 1 5/6) for the χρῶμα μαλακόν: "the soft chromatic, in which the *pyknon* consists of three enharmonic *dieses* less the twelfth of a tone" (ἐν ᾧ τό πυκνὸν τριῶν ἐστι διέσεων ἐναρμονίων μεῖον δωδεκατημορίῳ τόνου).

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7   For the structure of the *Anonymi* see Najock 1972, 187-91.

In § 27, *Anonymus* II describes correctly the four kinds of modulation (κατὰ γενος, κατὰ ἦθος, κατὰ τόπον, κατὰ ῥυθμόν), but the paragraph about keys (τόνοι) promised in § 20 is omitted. The catalogues of the τόνοι of the *hydraulos*, citharodes, auletes and dance music in § 28 might serve as a substitute. The paragraph about melody-making, promised in § 21, is missing as well.

5   *Anonymus* III (§§ 29-66)

Anonymus III begins (29) with the familiar definition of music: "Music is a theoretical and practical science of the perfect *melos* and instrumental music or the art of proper or improper melodies and rhythms, which aims at the culture of character" (μουσική ἐστιν ἐπιστήμη θεωρητικὴ καὶ πρακτικὴ μέλους τελείου τε καὶ ὀργανικοῦ ἢ τέχνη πρεπόντων τε καὶ μὴ πρεπόντων ἐν μέλεσι καὶ ῥυθμοῖς συντείνουσα πρὸς ἠθῶν κατασκευήν). This definition combines the technical side of music with the so called 'Ethoslehre', the doctrine of the effects aroused by music.[8]

In § 30, three branches of music, harmonics, rhythmics, metrics, are introduced by a literally quotation from Alypius § 1 (367.1-7 Jan). *Anonymus* III adds three more branches, organology, poetics and acting, but limits his treatment to harmonics, the seven parts of which (sounds, intervals, systems, genera, keys, modulations and melody-making) are set out in § 31.

The treatment of sound (φθόγγος) is postponed to §§ 48-9, while §§ 33-47 broadly deal with the Aristoxenian topic of the two movements of the voice (κίνησις φωωνῆς), which can be continuous as in speech (συνεχής τε καὶ λογική), or stepwise and melodic, as when singing (διαστηματικὴ τε καὶ μελῳδική). We find it in Aristoxenus (*Harm.* 15.4-5 Da Rios) and in Nicomachus (§ 2), Cleonides (§ 2) and Gaudentius (§ 1). The theory about voice (περὶ φωνῆς) is not a part of the Harmonics, but gives a good starting point for the discussion of sound and interval. Cleonides (§ 2) succeeded in deriving φθόγγος and διάστημα completely from the κίνησις φωνῆς.

In § 48, *Anonymus* III compares, like *Anonymus* II in § 21, the φθόγγος with the point in geometry, with the number one in arithmetic and with the letter in the alphabet, a notion which appears also in the excerpts of Nicomachus (§ 6, p. 276 f. Jan). After that, an Aristoxenian definition of the φθόγγος on the basis of the theory of the movement of the voice follows: "sound is the falling of the melodic voice on one certain pitch" (φθόγγος δέ ἐστιν φωνῆς ἐμμελοῦς πτῶσις ἐπὶ μίαν τάσιν).

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8   The term 'Ethoslehre' was coined by Abert (1899).

In § 50, *Anonymus* III describes, with more detail than *Anonymus* II in § 22, the intervals as the difference of two pitches: "the interval seems, to cut it short, the difference of tension" (τὸ γὰρ διάστημα φαίνεται, ὡς τύπῳ εἰπεῖν, τάσεως διαφορὰ εἶναι).

In § 51, *Anomymus* III repeats literally the definition of *Anonymus* II in § 23. Both connect the topic of the "ranges of voice" (τόποι φωνῆς) with the notion of system: "the system is the combination of several sounds which has a certain position in the range of voice" (σύστημα δέ ἐστι σύνταξις πλειόνων φθόγγων ἐν τῷ τῆς φωνῆς τόπῳ θέσιν τινὰ ποιὰν ἔχουσα). *Anonymus* II adds only a definition of the range of voice: "the range of the voice is the range which the singing voice traverses between high and low" (τόπος δὲ τῆς φωνῆς ἐστιν, ὃν διέξεισι μελῳδοῦσα ἐπὶ τὸ ὀξὺ καὶ βαρύ). Nonetheless, *Anonymus* III adds later, in §§ 63-4, four ranges of the voice around the *hypatē*, the *mesē*, the *nētē* and the *nētē hyperbolaiōn*, and assigns these ranges to the corresponding tetrachords.

In §§ 52-5, *Anonymus* III broadly explains the three genera according to Aristoxenus: the values of the enharmonic are 1/4, 1/4, 2, while the values of the χρῶμα μαλακόν are 1/3, 1/3, 1 5/6, for the χρῶμα ἡμιόλιον 3/8, 3/8, 1¾, for the χρῶμα σύντονον 1/2, 1/2, 1½. The values of the διάτονον μαλακόν are 1/2, 3/4, 1¼, for the διάτονον σύντονον 1/2, 1, 1. A definition of the *pyknon* and a list of the steps which can constitute it, the *parhypatai* and the *lichanoi*, follows (56-7).

In §§ 58-62, intervals are classified according to their size (κατὰ μέγεθος), to consonance or dissonance (σύμφωνα ἢ διάφωνα), to being composed or not, (σύνθετα ἢ ἀσύνθετα), to *genos* (κατὰ γένος) and to being rational or irrational (ῥητὰ ἢ ἄρρητα). A classification of the intervals according to the position of the *pyknon* or the entire tone follows. This paragraph should come after 50, at the position where Cleonides offers it (5, before the genera, 6). In §§ 63-4, the aforementioned ranges of the voice are dealt with, which might replace the missing fifth paragraph about keys.

With § 65, *Anonymus* III comes to modulation (μεταβολή), which is first defined. Then modulations of *genos*, of *tonos* and of system are described. The modulation of rhythm (cf. *Anonymus* II.27) is omitted.

After that, we expect the last paragraph about μελοποιΐα ("melody-making"). Instead the archetype has a medley of the end of a treatise and of the beginning of another treatise: "melody-making is some use of the elements of the musical science which falls in many branches, one of which is harmonics, which is divided into fifteen keys, the first of which is Lydian" (§ 66, μελοποιΐα δέ ἐστι ποία χρῆσις τῶν ὑποκειμένων τῆς μουσικῆς ἐπιστήμης πολυμεροῦς ὑπαρχούσης ἧς μέρος ἐστὶν ἡ ἁρμονικὴ διαιρεθεῖσα εἰς τρόπους πεντεκαίδεκα ὧν πρῶτος λύδιος).

After ὑποκειμένων, three manuscripts (B, H, S) set a full stop. Therefore Jan (1871, 414) established after ὑποκειμένων the end of *Anonymus* III and the

beginning of a new treatise, *Anonymus* IV. Consequently, the ἧς of the archetype (A, B, C) before μέρος had to be deleted. By comparing the beginnings and ends of several treatises, it can be proved that Jan was right: Cleonides begins his last paragraph (§ 14) with a definition which resembles almost literally the text of *Anoymus* II: "melody-making is the use of the aforesaid parts of harmonics and its elements which have meaning" (μελοποιΐα ἐστὶ χρῆσις τῶν προειρημένων μερῶν τῆς ἁρμονικῆς καὶ ὑποκειμένων δύναμιν ἐχόντων). After that, Cleonides explains the four elements of melody-making, namely ἀγωγή, πλοκή, πεττεία and τονή, while *Anonymus* III breaks off after the definition of melody-making.

Najock assured me of his opinion, expressed already in 1972 and 1975, that the text before and after § 66 belongs to one and the same compiler, his *Anonymus* III, and supported this opinion with excellent observations. It is indeed true that the compiler of the *Syngramma* understood my *Anonymi* III and IV as a single entity. But this is no obstacle against my aim to disentangle the *Syngramma* into its preceeding sources, namely five independent treatises. Of course, there is no real controversy: Najock reconstructs correctly the archetype of the compiler of the *Syngramma*, while I (following Jan) try to reconstruct an elder level of transmission. This shall become evident in the following observations.

6   *Anonymus* IV (§§ 66-82)

According to Jan, with the definition in § 66.12-4 a new treatise begins. From the many branches of music, this treatise singles out harmonics, which is divided into fifteen keys, the first of which is the Lydian: "the musical science falls in many branches, one of which is harmonics, which is divided into fifteen keys, the first of which is Lydian" (τῆς μουσικῆς ἐπιστήμης πολυμεροῦς ὑπαρχούσης μέρος ἐστὶν ἡ ἁρμονικὴ διαιρεθείσα εἰς τρόπους πεντεκαίδεκα, ὧν πρῶτος λύδιος). In § 67 the melodic and instrumental notation of the Lydian notation follows, with the following heading: "the signs of the Lydian key, above the signs for the sung text, below the signs for the instrumental music" (λυδίου τρόπου σημεῖα, τὰ μὲν ἄνω τῆς λέξεως, τὰ δὲ κάτω τῆς κρούσεως).

The first sentence of *Anonymus* IV finds a parallel in the beginning of *Anonymus* II (14): "it is crucial for harmonics, which is divided into fifteen keys, to distinguish the genera of the melodies" (καὶ τῆς μὲν ἁρμονικῆς εἰς τρόπους δεκαπέντε διαιρουμένης ἴδιον τὸ περὶ τῶν τῆς μελῳδίας γενῶν διαλαμβάνειν). Here the division of harmonics into fifteen keys has the aim to motivate the analysis of the genera. In *Anonymus* IV, however, the aim is to motivate the introduction

of the musical notation. In both cases, the singular division of harmonics into fifteen keys is puzzling, given the familiar seven paragraphs of harmonics.

The riddle is solved by Alypius, who is the source of both quotations. Having set out in § 2 the seven canonical parts of harmonics, Alypius introduces in § 3 a new aim:[9] he wants to explain the elements of harmonics better by furnishing the fifteen keys with the help of the musical notation of them, in order to advance the beginner's understanding. He does not divide harmonics into fifteen keys like the *Anonymi*, but promises an exposition (παράδοσις) with the help of the fifteen keys. After that, he adds a heading about notation, which was literally adopted by *Anonymus* IV (§ 67): "it might be useful for us, and at the same time necessary for beginners in a more paedagogic way, to submit an exposition of the elements of harmonics, and before all to divide this exposition into the so called tunes and keys, the number of which is fifteen. The first of them is the Lydian. The signs of the Lydian key, above the signs for the sung text, below the signs for the instrumental music" (§ 3, εὐχρηστόν ἐστιν ἡμῖν ἅμα δὲ καὶ ἀναγκαῖον διδασκαλικώτερον ἀρχομένοις τῆς ἁρμονικῆς στοιχειώσεως τὴν παράδοσιν ποιεῖσθαι καὶ πρὸ πάντων αὐτὴν διελεῖν εἰς τοὺς λεγομένους τρόπους τε καὶ τόνους, ὄντας πεντεκαίδεκα τὸν ἀριθμόν. Ὧν ἐστι πρῶτος ὁ λύδιος. Λυδίου τρόπου σημεῖα, τὰ μὲν ἄνω τῆς λέξεως, τὰ δὲ κάτω τῆς κρούσεως).

In § 67, *Anonymus* IV had presented the Lydian key with the names of the 18 steps and their vocal and instrumental notation. § 68 explains the double series of notation: "the twofold shape of the note-signs was chosen, as their use was twofold too, for notation of vocal or instrumental melodies" (διπλοῦς ὁ χαρακτὴρ τῶν φθόγγων εἴληπται, ἐπειδὴ διπλῆν ἔχει τὴν χρῆσιν, ἐπὶ λέξεως γὰρ καὶ κρούσεως).

A convincing explanation for the invention of two rows of different notational signs follows, which is confirmed by the musical fragments:[10] "since in the vocal parts sometimes instrumental interludes intervene, it was necessary to use different note signs for them. For the instrumental melody shall have a particular beginning of reading, announcing that it must be executed instrumentally, and that the notation is not a privilege of text, but that either a vocal melody is developed according to the syllables of the text, or that there is a transition to an instrumental interlude or postlude" (καὶ ὅτι ἐν τοῖς ᾄσμασί ποτε μεσολαβεῖ καὶ κῶλα, καὶ διαφόρῳ χαρακτῆρι τοτ᾽ ἀνάγκη χρήσασθαι. ἰδίαν γὰρ ἀρχὴν τῆς ἀναγνώσεως λήψεται τὸ μέλος καὶ καταμηνύει, ὡς ἐν κρούσει τὴν χρῆσιν

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9   For a better understanding of Alypius § 3 see Hagel 2018.

10   See DAGM 3, 11, 15, 16. A special case is DAGM 21, the paean of Limenios, written in instrumental notation, and DAGM 42 line 5, where an instrumental interlude is written by vocal notation.

ἔχει, καὶ ὅτι οὐ ῥητῷ παραλέλειπται ἡ στίξις, ἀλλ' ἔστιν ἢ παρελκυσμὸς μέλους κατὰ τὰς τοῦ ῥητοῦ συλλαβὰς ἢ μεταβολὴ ἐπὶ κῶλον μεσολαβοῦν ἢ ἐπαγομένον).

Quite different is the explanation for the διπλοῦς χαρακτήρ of the notation in Aristides Quintilianus, who assigns vocal melodies (ᾠδαί) to the vocal notation, and interludes by the *aulos* or the *kithara* (τὰ ἐν ταῖς ᾠδαῖς μεσαυλικὰ ἢ ψιλὰ κρούματα) to the instrumental notation.[11]

In § 69, *Anonymus* IV builds up the 5 tetrachords of the Greater System by enumerating the usual names for the 18 steps of it. As Najock (1972, 200) has noted, the terminology, and the source together with it, has changed: instead of τόνος we find τρόπος, instead of λιχανός we find διάτονος, and instead of παραμέση, παράμεσος. In § 70, *Anonymus* IV defines the intervals between the 18 steps mentioned before, using half-tones (ἡμιτόνια) and tones (τόνοι) as the unit of measurement. When analysing the fourth (§ 71), the fifth (§ 72) and the octave (§ 73), *Anonymus* IV adds the Aristoxenian quartertone (δίεσις). Thus, the fourth has two-and a half tones, five half-tones and ten dieses. But this Aristoxenian reckoning, as we know, is incompatible with the epitritic proportion of the fourth, which is added after: five equal half tones amount to 500 Cent, while the epitritic fourth amounts to 498 Cent. The same holds good for the analysis of the fifth, which has, according to *Anonymus* IV, three-and a half tones, seven half-tones and fourteen dieses, and the hemiolic proportion: seven equal half tones amount to 700 Cent, while the hemiolic fifth amounts to 702 Cent. Evidently, from § 69 onwards, *Anonymus* IV uses a source which tries to reconciliate the Aristoxenian with the Pythagorean system by adding Pythagorean proportions to the Aristoxenian addition of equal half tones.

In § 74-6, the Aristoxenian reckoning is abandoned. The whole tone is found as the difference of the fifth and the fourth or the quotient of 3/4 and 2/3 = 9/8 which cannot be divided into equal parts. Thus, the Pythagorean 9/8-tone is divided into two inequal parts, the *leimma* (243:256) and the *apotomē* (2048: 2187), which is a *leimma* plus the *komma* (524288:531441).

Without any connection, at the end of § 77 a survey on the ancient system of solmisation follows,[12] which assigns the border notes (φθόγγοι ἑστῶτες) of the tetrachord the syllable τα, the inner notes (φθόγγοι κινούμενοι) of the tetrachord the syllables τη and τω. The lowest note (προσλαμβανόμενος) is τω, its octave (μέση) is τε. *Anonymus* IV assigns the respective syllables to the vocal and instrumental notes of the five tetrachords of the Greater System. The solmisation is broadly treated by Aristides Quintilianus, who derives his interpretation of

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11　*De Musica* 1.11, 23.18-25 W.-I.

12　Cf. West 1992, 265.

the ethical qualities of the respective vowels from the school of Damon.[13] This might confer the solmisation a Pythagorean character.

In § 77, the vocal and instrumental Lydian note signs of the three tetrachords of the σύστημα ἔλαττον follow, accompanied by a series of numbers starting with 192. By multiplying this number, which is a multiple of 3×2 (2 in the 6th power × 3), with the proportions of the intervals 2:1 for the octave, 3:2 for the fifth, 4:3 for the fourth, 9:8 for the Pythagorean whole tone and 256:243 for the smaller half tone, you receive the aforesaid series of numbers. It is puzzling that the archetype omits here the four tetrachords of the σύστημα μεῖζον, which appears in § 96 with the basic number 324. This list should be inserted before the σύστημα ἔλαττον in § 77.

Instead, after § 78 the archetype adds in § 79 four pairs of vocal and instrumental notes for the steps *d' h' c' d'* and four numbers (576, 648, 729, 768) for the steps *e' fis' gis' a'*, which do not match the highest Lydian tetrachord (*e' f' g' a'*). Evidently, four pairs of notes for *e' f' g' a'* and four numbers for the steps *d' h' c' d'* are lost. Najock (1972, 60-2, 130f.) has found a splendid explanation for this severe corruption. Considering further many traces of maiuscle letters in § 77 and 79,[14] he reconstructed a precursor of the archetype in minuscles and two precursors in maiuscles, the first of which, the compilator of the *Anonymi*, goes back to late antiquity (V or VI century), the time in which the first *corpora* of musical theory were compiled.[15] The first *corpus* of the *Anonymi* already contained the aforesaid corruption. Evidently, the compilator wanted to provide a supplement to the σύστημα μεῖζον in § 77, and borrowed his numbers, which are wrong in § 79, mechanically from § 96.

§ 78 explains the melodic movements of the rising and falling fourth: "the *agōgē* is the continuous way from the low,{the analysis is the opposite}, or the movement of sounds from the lower to the higher, the analysis is the opposite" (ἀγωγὴ προσεχὴς ἀπὸ τῶν βαρυτέρων ὁδός, {ἀνάλυσις δὲ τὸ ἐνάντιον}, ἢ κίνησις φθόγγων ἐκ βαρυτέρου τόπου ἐπὶ ὀξύτερον, ἀνάλυσις δὲ τὸ ἐνάντιον).

§ 80 has the heading τῶν τοῦ λυδίου τρόπου συμφωνιῶν αἱ καταγραφαί. Ἀγωγὴ τοῦ διὰ τεσσάρων κατὰ σύνθεσιν ("Table of the consonances in the Lydian key. *Agōgē* of the fourth according to the synthesis). A table follows, the first line of which gives in instrumental notation the steps *d-e-f-g-d-g*, and after this, *g-f-e-d-g-d.* This series is repeated on each step of the Lydian key until the highest tetrachord of the Lydian key with the series *e'-f'-g'-a'-e'-a'* and after this *a'-g'-f'-e'-a'-e'*.

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13   Cf. *De Musica*, 3.13-4, 77.30-81.6 W.-I.; οἱ περὶ Δάμωνα, 3.14, 80.28 W.-I.

14   See also μECH in § 96.

15   See Pöhlmann 2009, 73-91, esp. 84f.

§ 81, with the heading ἀνάλυσις τοῦ διὰ τεσσάρων ("analysis of the fourth"), repeats § 80 in reverse succesion, beginning with the steps *e'-a'-e'-f'-g'-a'* and after this *a'-e'-a'-g-'f'-e'*. This series is repeated on each step of the Lydian key until the lowest tetrachord with the series *d-g-d-e-f-g*, and after this *g-d-g-f-e-d*. The ascending and descending successions are explained in § 78 as exercises for the exact singing and hearing of the corresponding intervals.

Of § 82, only the heading (διαιρέσεις ἢ καὶ μίξεις τῆς διὰ πέντε συμφωνίας, "analyses or combinations of the consonance of the fifth") is preserved. Evidently, tables like §§ 80-1 for the fifth followed, but the archetype has a strong interpuction (·:·), and a lacuna after this, which is highlighted in codex Laurentianus by *multa deesse videntur,* and after this the title of a new treatise, Περὶ μελοποιΐας.

7   *Anonymus* v (§§ 83-104)

Anonymus v is preserved only in A, the Venetus Marcianus VI 10 (XII century) with a gap between §§ 82-3, where the table of the *agōgē* and analysis of the fifth is missing. The next direct copy of the archetype is B, the Neapolitanus Graecus III C 4 (XIV century), which omits, besides the tables after § 82, the end of the treatise (§§ 83-104). The last direct copy of the archetype is C, the Florentinus Riccardianus Graecus 41 (XVI century), which omits, besides the tables after § 82, and §§ 83-104, also the tables §§ 80-1, the *agōgē* and analysis of the fourth, and the following heading in § 82. Najock has convincingly demonstrated that the archetype was disintegrated step by step at its end from the XII to the XVI century.[16]

As we have seen, *Anonymus* v until § 93 is another version of *Anonymus* I.[17] A series of incoherent supplements follows, for which Alexandre Joseph Hydulphe Vincent tried to find better places.[18] Following Vincent, we might try to find the presumed original succession of entries in *Anonymus* v.

§ 94 deals with the compass of the human voice, which is limited to the Lydian double-octave (*d-d"* corresponding to *B-b'* in absolute pitch[19]). A better place for this paragraph might be after § 62.[20]

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16   See Najock 1972, 58-61.

17   For the differences between the two, see Najock 1972, 161-82.

18   See the critical footnotes under **Vc** in Najock 1972 and 1975.

19   See West 1992, 273-6.

20   Cf. Vincent 1847, 31.

§ 95 falls into two parts: the first sentence points to coloraturas and un-metrical instrumental phrases (κεχυμέναι ᾠδαὶ καὶ μέλη). It might be inserted after § 85 (and § 3).[21] The second sentence (ὁ χρόνος ἑαυτὸν οὐ δύναται μετρῆσαι, τοῖς οὖν ἐν αὐτῷ γινομένοις μετρεῖται, "time is not measured by itself. It is measured by the events in itself") is Aristoxenian,[22] and finds a better place after § 83 (and § 1).[23] § 96, a list of notes and numbers from 324 for the σύστημα μεῖζον, has already found its place before § 77.[24] Instrumental pieces follow (§§ 97-104), interrupted only by § 102, the signs for the values of the pause, which has found its place after § 83 (and § 1) and § 103, advice for calculating ratios, which should be inserted after § 76.[25]

By moving the dispersed supplements to their proper places, *Anonymus* V regains a simple structure: §§ 83-93, another version of *Anonymus* I (§§ 1-11), are followed by musical examples, the instrumental pieces §§ 97-101 and§ 104. There is no convincing explanation for the agglomeration of the dispersed supplements after § 93. But the puzzling duplication of *Anonymus* I by *Anonymus* V finds an analogy: in some collective manuscripts which were compiled from two different sources, Cleonides and Euclides can be found twice.[26] The same might be guessed for the *Anonymi*: the compiler used two sources, §§ 1-66, 19.11 Najock, and §§ 66, 19.12 Najock-§ 104, which contained different versions of Περὶ μελοποιίας (§§ 1-11 = §§ 83-93). By gluing these sources together, he produced the text of the predecessor of the archetype, according to Najock in the V or VI century AD.

Bibliography

Abert, H. (1899). *Die Lehre vom Ethos in der griechischen Musik*. Leipzig: Breitkopf & Härtel (repr. Wiesbaden 1968).

Bellermann, F., ed. (1841). *Anonymi Scriptio De Musica: Bacchii Senioris Introductio Artis Musicae*. Berlin: A. Foerstner.

Fuhrmann, M. (1960). *Das systematische Lehrbuch. Ein Beitrag zur Geschichte der Wissenschaften in der Antike*. Göttingen: Vandenhoeck & Ruprecht.

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21   Cf. Vincent 1847, 51.

22   Cf. Aristox. *Rhythm.* 2.6 § 272 Morelli (Pearson 1990, 4.15f.).

23   Cf. Vincent 1847, 48.

24   See above and Vincent 1847, 41.

25   For § 102, see above and Vincent 1847, 49. For §103, see Vincent 1847, 37.

26   See Pöhlmann 2009, 86-9 n. 90.

Hagel, S. (2018). 'Musics', Bellermann's *Anonymi*, and the art of the *aulos*. GRMS 6, pp. 128-176. DOI: 10.1163/22129758-12341316

Jan, C. von (1871). Die griechische Musik. Zweiter Artikel. Die excerpte aus Aristoxenus. *Philologus* 30, pp. 398-419.

Jan, C. von (1895). *Musici Scriptores Graeci*. Leipzig: Teubner.

Najock, D. (1972). *Drei anonyme griechische Traktate über die Musik: eine kommentierte Neuausgabe des Bellermannschen Anonymus*. Kassel: Bärenreiter.

Najock, D. (1975). *Anonyma de Musica Scripta Bellermanniana*. Leipzig: Teubner.

Pöhlmann, E., and West, M.L. (2001). *Documents of Ancient Greek Music. The Extant Melodies and Fragments Edited and Transcribed with Commentary* (DAGM). Oxford: Clarendon Press.

Pöhlmann, E. (2009). *Gegenwärtige Vergangenheit: Ausgewählte Kleine Schriften*, edited by G. Heldmann. Berlin/New York: De Gruyter.

Ruelle, Ch.É. (1875). *Études sur l'ancienne musique grecque: Rapports à M. le Ministre de l'Instruction publique sur une mission littéraire en Espagne*. Archives des missions scientifiques et littéraires, extrait. Troisième série. Tome deuxième. Paris: Imprimerie Nationale.

Tertsēs, Chr., ed. (2010). Διονυσίου "Τέχνη μουσική". Athens: Ακαδημία Αθηνών.

Vincent, A.J. (1847). *Notice sur divers manuscrits grecs relatifs à la musique, avec une traduction française et des commentaires*. Notices et extraits des manuscrits de la bibliothèque du roi et autres bibliothèques, vol. 16.1. Paris: Imprimerie royale, pp. 1-233 (sections 1-11, 77-104).

West, M.L. (1992). *Ancient Greek Music*. Oxford: Clarendon Press.

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'Musics', Bellermann's *Anonymi,* and the Art of the *Aulos*

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Abstract

Apart from the better studied musical 'handbooks' of the Roman period, mostly focused on matters of harmonics and sometimes rhythmics, there was a type of text known as 'Musics'. The article discusses their characteristics, their function in ancient schooling and their relation to extant texts and excerpts, most notably the collection known as Bellermann's *Anonymi.* The 'instrumental exercises' found at the end of these are evaluated as instrumental pieces posing various challenges to beginners on the *aulos*; a new rhythmical reconstruction is proposed for one of them.

The collection of unattributed texts first edited by Johann Friedrich Bellermann comprises a wide range of musical topics, from the classification of melodic figures to dry handbook-style definitions.[1] It is now supposed to consist of up to five distinct texts,[2] recognisable by their starting with a general definition, though hardly any contains a satisfactory ending. The last duplicates the first, but with remarkable differences in detail. This points to a tradition as 'open texts', not regarded as works by an author to be faithfully copied, but as serving

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1   Bellermann 1841; Vincent 1847; Ruelle 1908; Najock 1972; Najock 1975; cf. Winnington-Ingram 1975; Pöhlmann 1994.
2   Pöhlmann 1975; Pöhlmann 1994, 190f.; Pöhlmann 2018.

practical purposes and therefore being open to adaptation and rewriting. In the following I will try to pinpoint the kind of texts from which they are excerpted, as well as argue for their belonging to a specific subset of this genre, unlike almost all other fragments we know.

1   'Musics' vs. Harmonics

I will start from an explicit reference to the genre I have in mind, which appears in the handbook composed by Gaudentius.[3] When introducing the practice of musical notation, Gaudentius refers to the fact that each (functional) note may be found situated at many different pitches, these being separated by semitones. The reason for this, which he does not expound on and may not have been aware of, is to be sought in the circle of fifths, which in the harmonicists' understanding, most prominently expressed by Aristoxenus, divided the octave in twelve semitone steps, perceived as equal, just as on the modern equally-tempered keyboard. As a result, the model scale of the Perfect System might start from any note in this semitone grid, just as a modern, say, major scale, might start from any key on the keyboard (the main difference being that modern Western music has no vocabulary abstracting from modal aspects, while the Perfect System carried no modal connotation). As a result, all the (functional) notes were notated with different signs in every key, just as a modern major 'dominant' would be written as *g* in C major, but as *g#* in C# major, as *a* in D major and so on. This would leave Gaudentius' reader with two questions: firstly, since one evidently cannot have an infinite number of note symbols, on how many semitone-separated pitches would such series start? Secondly, what would be the signs used, and how would these be reused across different keys (such as the dominant *g* of C major is also used as the tonic of G major)? Gaudentius leaves the first question open, evidently implying that there is no definite answer. The second is readily answered, but Gaudentius does not intend to reproduce the required information within his work on harmonics:

> τὸ μὲν οὖν ὅσοις παραυξάνεσθαι δύναται τῶν φθόγγων ἕκαστος ἡμιτονίοις, οὐ ῥᾴδιον ἀφορίσαι. πρὸς γὰρ τὰς κατασκευὰς τῶν ὀργάνων καὶ τὴν δύναμιν τῆς ἀνθρωπίνης φωνῆς τὰ τοιαῦτα ὁρίζεται. τὸ δὲ ὅπως παραυξανόμενος ἐν διαφόροις σημείοις ἀποσημαίνεται, ἐκ τῶν διαγραμμάτων ἐν ταῖς μουσικαῖς ῥᾳδίως ἄν τις καταμάθοι (Gaud. 20, pp. 348.17-349.4 Jan).

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3   On the ancient musical 'handbooks' cf. Jan 1895; Zanoncelli 1990; Barker 1994; Pöhlmann 1994.

> It is not easy to define by how many semitones each of the notes may be raised, because such issues are determined by instrument design and the capacity of the human voice. On the other hand, the way in which they are notated by various signs throughout that process of raising can easily be understood from the diagrams in the *Musics*.

Evidently, Gaudentius regarded 'a Music' as a well-defined sort of text, which his readers would be familiar with. Moreover, he was confident that they would not find it difficult to access some text of this sort. Since he found it necessary to compose his own treatise on harmonics, but not to include such diagrams, this might even imply that '*Musics*' were more readily available than handbooks on harmonics. Gaudentius' plural also resonates with the idea of open texts: there are many, it does not really matter which you consult, their content is to a certain extent predictable. At any rate, a '*Music*' in Gaudentius' sense would be expected to provide tables of notation, perhaps in a form from which the relations between notes, keys and semitones could be easily gleaned. Later in the chapter Gaudentius refers to "Introductions" (εἰσαγωγαί) for the notation of enharmonic and chromatic *pykna*, most likely thinking of the same kind of text.

Do we have any such texts? Actually some of the extant musical treatises pronounce their topic as 'music' in contrast to others that define it as 'harmonics'—if this is not evident right from an initial definition, we can glean it in some other way from the opening lines. Gaudentius belongs to those writing on 'harmonics' (τῶν ἁρμονικῶν λόγων, p. 327.4 Jan), as do Cleonides (Ἁρμονική ἐστιν, p. 179.3 Jan), Nicomachus (ὁ περὶ τῶν ἐν τοῖς ἁρμονικοῖς στοιχείοις διαστημάτων τε καὶ σχέσεων … λόγος, p. 237.8-10 Jan) and of course Ptolemy (Ἁρμονική ἐστι, *Harm.* 1.1, p. 3.1 Düring). None of these works contains a full diagram of keys. Indeed Gaudentius is the only one who makes use of notation at all, up to detailing at least some scales, albeit only as lists of notes; his reference to the '*Musics*' proves that such lists are not what he considers sufficient for understanding the interrelation of keys.

Contrarily, all the works that describe their topic as *mousikē* or start from a definition of that term use notation. This is true for Bacchius (Μουσικὴ τίς ἐστιν; 1, p. 292.3 Jan) as well as Aristides Quintilianus (τοὺς περὶ μουσικῆς λόγους, 1.1, p. 1.8 W.-I.), and especially for Alypius, our most extensive source for the ancient notation (τῆς μουσικῆς, p. 367.3 Jan). But would these qualify as '*Musics*' in Gaudentius' sense?

The work of Bacchius does not contain a diagram. In the question-and-answer form in which it has come down to us, it cannot contain one, since a student's answer cannot possibly take the shape of a diagram. Might a diagram therefore have been lost when the treatise was reworked into questions and answers, as has been surmised? This also seems hardly possible, because the

text presumes a basic knowledge of notation, there being no traces of its having been explained at any point. Therefore, Bacchius' work appears rather to presuppose the student's prior familiarity with a '*Music*'.

Alypius' work, or what remains from it, also features no diagram. But since the manuscripts break off before his extensive lists—three times fifteen double octaves—are completed, we do not know whether these would have been followed by more text along the traditional lines of a treatise on harmonics, as appears announced in the preface, and/or perhaps by one or more diagrams of note signs that set all the scales in relation.

Finally, there is Aristides Quintilianus, the first of whose three books indeed included the kind of diagram we are looking for:

> πτέρυγι δὲ τὸ διάγραμμα τῶν τρόπων γίνεται παραπλήσιον, τὰς ὑπεροχὰς ἃς ἔχουσιν οἱ τόνοι πρὸς ἀλλήλους ἀναδιδάσκον (Aristid. Quint. 1.11, pp. 23.25-24.2 W.-I.).

> The diagram of keys [*tropoi*] resembles a wing, because it exhibits by how much the keys exceed each other.

The diagram itself is lost,[4] but we learn from the description that it did exactly what Gaudentius asks from it, being arranged so that the pitch differences (ὑπεροχαί, "excesses") become visible.[5] But Aristides' three books, composed in sophisticated style and ranging from technical basics to esoteric topics, cannot possibly be the kind of introductory text Gaudentius appears to have had in mind. Although Aristides did not write such a '*Music*', his aspiration finally to collect all music-related topics within one opus understandably led him also to include this sort of material:

> ἔτι γε μὴν καὶ διὰ τὸ μηδένα σχεδὸν εἰπεῖν τῶν παλαιῶν ἐντελῶς τοὺς περὶ αὐτῆς λόγους μιᾷ καταβαλέσθαι πραγματείᾳ, ἀλλὰ κατὰ μέρος ἕκαστον καὶ διεσπαρμένως περί τινων ἐξηγήσασθαι … (Aristid. Quint. 1.2, p. 3.12-15 W.-I.).

> And in addition, because practically nobody of the ancients has laid down the topics concerning music in a single treatise, but discussed each individually, in a disjointed manner …

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4 Cf. the reconstruction in Barker 1989, 428f.

5 The same is true of the diagram of keys that Boethius provides (*Inst. harm.* 4.16), likely following the lost work of Nicomachus. But since it includes only the eight keys of an older system, it does not belong within the tradition I am discussing here, which takes the fifteen keys of Roman-period musical practice for granted.

ἡμῖν δὲ τοῖς οὐ διὰ μέρους μουσικῆς παλαιοὺς μύθους διηγησομένοις ἀλλ᾽ αὐτήν
τε σύμπασαν ἥτις καὶ ὁποία πότ᾽ ἐστι παραστῆσαι πειρωμένοις... (Aristid.
Quint. 1.3, p. 3.25-27 W.-I.).

But for us, who do not intend to detail ancient tales about music covering
only parts of it, but try to present its entire nature and characteristics....[6]

It is of interest here how Alypius divides the subject matter of *mousikē*:

τῆς μουσικῆς ἐκ τριῶν τῶν συνεκτικωτάτων ἐπιστημῶν τελειουμένης,
ἁρμονικῆς ῥυθμικῆς μετρικῆς... (p. 367.3f. Jan).

Since music is fully constituted from three essential sciences, harmonics,
rhythmics and metrics....

Though the following sentences probably indicate that Alypius is going to
cover only the first of these—unlike the text under the name of Bacchius,
which covers metrical and rhythmical topics as well—the triad is identical
with the content of Aristides' first book; in his partition of the subject, it con-
stitutes the technical subdivision of the theoretical studies.

τὸ μὲν οὖν θεωρητικὸν εἴς τε τὸ φυσικὸν καὶ τεχνικὸν διαιρεῖται· ... τοῦ δὲ
τεχνικοῦ μέρη τρία, ἁρμονικὸν ῥυθμικὸν μετρικόν (Aristid. Quint. 1.5, p. 6.15-
18 W.-I.).

The theoretical part is divided into the physical and the technical [...]
and the technical has three parts, harmonics, rhythmics and metrics.

Though none of these texts provides a clear example of a '*Music*' in Gaudentius'
sense, Alypius' fragmentary work being the best candidate, they may give us
some reinforcement regarding the general idea. The usage of notation is clearly
associated with the subject matter of 'music' as opposed to 'harmonics', though
Alypius and Aristides evidently take it to belong to harmonics in a wider sense.
At any rate, knowledge of notation belongs with the 'technical' and therefore
theory, even though Aristides' first example for the practical parts, composi-
tion of melodies (*melopoiia*) would evidently make use of it.

    That a treatise on 'harmonics' in the Aristoxenian tradition would describe
its subject in terms of abstract definition without resorting to notation is not

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6   Cf. also 1.2, p. 3.12-18 W.-I.

surprising, since Aristoxenus himself had banned notation from forming part of this science, in contrast to some of his predecessors and contemporaries.[7] Gaudentius is the most liberal in this respect, including stances from allegedly conflicting schools of thoughts (Nicomachus does much the same, but claims that everything is Pythagorean). But harmonics need not be the starting point of musical education. As we have said, Bacchius, the most evidently didactical text in our collection, already presupposes the knowledge of notation, obviously presuming that prior to being taught the 'technical triad' some more basic education would already have taken place—and that this would have familiarised the novice with at least the basics of notation.

Such a view is explicitly confirmed by Alypius. After listing the traditional seven chapters of Aristoxenian harmonics (2, p. 367.10-15 Jan), he introduces his tables by a statement that has evoked puzzlement in modern readers not only for its syntactical ambiguity:

> οὕτω δὲ τεταγμένων τούτων εὐχρηστόν ἐστιν ἡμῖν ἅμα δὲ καὶ ἀναγκαῖον διδασκαλικώτερον ἀρχομένοις τῆς ἁρμονικῆς στοιχειώσεως τὴν παράδοσιν ποιεῖσθαι καὶ πρὸ πάντων αὐτὴν διελεῖν εἰς τοὺς λεγομένους τρόπους τε καὶ τόνους, ὄντας πεντεκαίδεκα τὸν ἀριθμόν (p. 367.16-21 Jan).

> This being arranged in that way, it is useful for us—and at the same time necessary for those who set out in a more didactic manner—to communicate the elements of harmonics and, above all, divide it into the so-called *tropoi* or *tonoi*, of which there are fifteen.

This, at least, is the only way I can see the text as it stands makes sense: ἀναγκαῖον requires some justification, so the minor phrase introduced by ἅμα δὲ καί must extend beyond it, at least to ἀρχομένοις; the latter would go well with either τῆς ἁρμονικῆς στοιχειώσεως ("who start with elementary teaching of harmonics") or τῆς ἁρμονικῆς στοιχειώσεως τὴν παράδοσιν ποιεῖσθαι ("who start to communicate the elements of harmonics"), but this would require deleting the following καί—not a big change, since the conjunction may well have been added between the two infinitives by a copyist who got lost in the syntax. If the καί is retained, however, ποιεῖσθαι together with διελεῖν belongs with εὐχρηστόν ἐστιν ... καὶ ἀναγκαῖον, and since τὴν παράδοσιν ποιεῖσθαι alone makes no sense, τῆς ἁρμονικῆς στοιχειώσεως τὴν παράδοσιν would have to belong together. This would be the necessary reading, but it is by no means a lucky one, because any reader would automatically take the genitive following ἀρχομένοις as

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7   Cf. Aristox. *Harm.* 2.39-41, p. 49.1-51.7 Da Rios.

belonging with it, and then naturally extend it to the infinitive, while the need to re-scan the entire structure backwards from καί runs counter to intuition. Finally, separating τῆς ἁρμονικῆς from στοιχειώσεως τὴν παράδοσιν ("necessary for those who start harmonics in a more didactic manner to communicate elementary teaching") is not an option either, firstly because 'starting harmonics' is a clumsy phrase and hardly expected when teaching is envisaged, secondly because στοιχειώσεως without an article would not be expected to stand before and outside τὴν παράδοσιν, and finally because "to communicate elementary teaching" is hardly a meaningful phrase either. This last phrase would only gain some meaning if στοιχείωσις is taken to mean "notation", which may be tempting considering the term's association with alphabetic writing.[8] But στοιχείωσις had become a standard term for "elementary introduction", especially in the sense of an introductory handbook, and this included musical handbooks as becomes clear from the title under which a work by Ptolemaïs was quoted: Πυθαγορικὴ τῆς μουσικῆς στοιχείωσις, "Pythagorean introduction to music" (Porph. *In Ptol. harm.* p. 22.23f. Düring).

However the text is read or emended, Alypius regards an exposition of the fifteen keys as the most didactic way of approaching harmonics, evidently in contrast to the more systematic and scientific approach we know from other texts. Alypius thus provides exactly that 'introductory' material that Bacchius presupposes. Modern readers, in contrast, abhorring the unwieldiness of ancient notation, have hardly taken Alypius' stance seriously.[9] Such an approach, however, fails to appreciate a crucial point: no modern reader would be able to make sense of any ancient musical text, from Aristoxenus up until late antiquity, were it not for her own musical training. Without having grasped fundamental ideas about how notes may form intervals and scales, the definitions of theory would remain meaningless wordplay. The extent to which even modern experts on the topic rely on their own musical training when approaching ancient music becomes especially clear from the habit of representing not only ancient melodies but also the ancient scales of theory in modern stave notation, even though it is particularly ill-suited for that task. Similarly, no ancient student could be expected to understand either Aristoxenian definitions or interval mathematics without first being familiar with the phenomena that these describe. For this reason, an elementary practical education appears indeed prerequisite to the study of harmonics. Gaudentius acknowledges this explicitly, making it the topic of his preface:

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8 Cf. Zanoncelli 1990, 383.

9 E.g., at the 2017 Summer Seminar of the ΜΟΙΣΑ society, nobody stood up against mockery directed against Alypius on precisely his claim of proceeding 'more didactically'.

τὸν τὲ ἀκουσόμενον τῶν περὶ ταῦτα λόγων ἀναγκαῖον ἐμπειρίᾳ τὴν ἀκοὴν
προγεγυμνάσθαι, φθόγγους τε ἀκούειν ἀκριβῶς καὶ διαστήματα ἐπιγινώσκειν,
σύμφωνόν τε καὶ διάφωνον, ὅπως τῇ τῶν περὶ τοὺς φθόγγους ἰδιωμάτων
αἰσθήσει τὸν λόγον ἀκολούθως ἐπιθεὶς τελείαν τὴν ἐπιστήμην πείρᾳ καὶ λόγῳ
νῦν ηὐξημένην ἐργάσαιτο. ὃς δὲ οὐδὲ φθόγγον κατακούων οὐδὲ τὴν ἀκοὴν
γεγυμνασμένος ἥκει τὸν λόγον ἀκουσόμενος, οὗτος ἀπίτω τὰς θύρας ἐπιθεὶς
ταῖς ἀκοαῖς. ἐμφράξει γὰρ τὰ ὦτα καὶ παρὼν τῷ μὴ προγινώσκειν ταῦτα
αἰσθήσει περὶ ὧν οἱ λόγοι (p. 327.8-18 Jan).

> Whoever aspires to hear about this must have their hearing trained by
> experience beforehand, to hear notes with precision and to recognise in-
> tervals, concordance and discordance, so that they may build upon their
> perception of the individual characteristics of notes when subsequently
> applying reason and in this way creating a perfect understanding, now
> nourished by experience as well as reason. But whoever cannot discern a
> note or has no trained ear and yet comes to listen to the words of reason
> may depart again and shut the doors of their ears. They will block their
> ears anyway, even when staying, because they do not know in advance by
> perception what the words of reason are about.

How are we to imagine such elementary musical education in the Roman
period? Clearly the most effective means for understanding notes and scales is
an instrument on which these stand out clearly. In modern times, this is most
typically the piano, which exhibits the pattern of diatonic heptatony (in white)
as well as its extension to complete chromaticism (in black), in a scheme that
repeats throughout many octaves. In ancient times, such an instrument would
hardly have sufficed, falling short of reflecting a number of more delicate
tunings which were in common use, as Ptolemy tells us.[10] The instrument of
choice for upper-class education was certainly the lyre, which combined philo-
sophical acceptance with the practical advantage of learning how to tune no
less than how to play, thus ensuring the appreciation of various intervals that
Gaudentius demands—and which he would hardly have been in the position
to demand in a handbook to be circulated in the upper class, had its members
not generally received precisely such a sort of musical education.

Of course, practical acquaintance not only with an instrument but also with
note names and notation looked back at a long tradition, best known from the
customary musical training Athenian boys received at the *kitharistēs*. Aristoxenus'
Harmonics presuppose not only an elementary familiarity with intervals but also

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10   Ptol. *Harm.* 2.16, p. 80.8-18 Düring.

the knowledge of note and tetrachord names; if he expected his audience to follow his arguments about the shortcomings of notation, they would in fact have needed to be acquainted with this art as well.[11] Later inscriptional evidence testifies to string players employed as official music teachers at Teos, teaching 'τὰ μουσικά', "the matters of music", and students were engaged in public competitions involving various sorts of musical activities including not only playing the lyre and the *aulos*, bot notably also *rhythmographia* and *melographia*, terms that most probably referred to instrumental and vocal composition.[12]

All in all, we would therefore expect from a typical Roman-period '*Music*' to remain very close to the requirements of practical musical schooling, which might include lessons in lyre playing, and therefore an account of note names as well as notational signs.

2   A Lyre 'Music'

One text with precisely such characteristics seems to have survived into the Byzantine period when it was excerpted and subsequently lost.[13] The compiler(s) addressed it as '*The Music*', as if there was only one work that merited this designation. It contained the source for the famous *koinē hormasia* found in the codex *Palatinus* gr. 281, fol 173r, as well as songs by Mesomedes, according to codex *Ottobianus* gr. 59, fol. 31v.[14] The almost identical references preceding these excerpts (*Pal.*: ἀπὸ τῆς μουσικῆς μεταβληθεῖσα, *Ott.*: παρεξεβλήθησαν ἀπὸ τῆς μουσικῆς) make it virtually certain that both derive from the same source.[15]

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11   Cf. n. 7 above.

12   Hirschfeld 1875; Hagel/Lynch 2015, 406-8.

13   Hagel 2009a, 132 n. 79; Hagel/Lynch 2015, 406.

14   Jan 1895, 420-23; Reinach 1896; Pöhlmann 1970 no. 6; Pöhlmann/West 2001 no. 24-31; Hagel 2009a, 122-32.

15   The picture is however blurred by the abbreviated remark ἀπὸ τῆς μουσικῆς that precedes a series of musical scholia in codex *Vaticanus* gr. 192, fol. 224r; cf. Reinach 1897: "Sa compilation paraît avoir eu le titre ἡ μουσική et elle est peut-être identique au traité d'où est extraite l'*Hormasia*" (324). Since the scholia apparently date from the Byzantine period and exhibit limited understanding, it is however difficult to imagine which kind of text would have combined them with genuinely ancient material, unless that whole 'μουσική' was but a wild collection of all kinds of musical stuff. But such an assumption cannot account for the context of the scholia within the codex: they are preceded and followed by tables that would much more readily fit in with the *hormasia* but are not similarly referenced: why would the writer of *Vat.* gr. 192, otherwise so interested in tables of notes,

From the arrangement of the *hormasia* it transpires that it almost certainly relates to the procedure of tuning a nine-stringed lyre. The same instrument accompanied the pieces by Mesomedes until late antiquity: around 400 CE the Egyptian philosopher-bishop Synesius quotes from the Hymn to Nemesis as something that "we sing to the lyre" (πρὸς λύραν ᾄδομεν: *Ep.* 95, 161.9-13 Garzya). This 'we', directed by one member of the educated elite to another, appears to establish the piece as a standard, which can only mean that it would ordinarily have formed part of conventional musical training in the fourth century.

Here all the pieces finally fall together. A book that contained lyre-tuning instructions and note tables, such as found in the *hormasia*, as well as scores of songs to be sung to the lyre would provide the optimal environment for acquainting students with musical structures as well as notation in a practical context, preparing them at the same time for more theoretical musical schooling as part of what was to become the 'liberal arts'. Being known as '*The Music*', it appears to have fulfilled all the requirements we have inferred from Gaudentius. As we have seen, such a '*Music*' was hardly a fixed text or the only of its kind; but at least one of those schoolbooks had apparently survived long enough to attract the interest of Byzantine scholars.

3   Bellermann's *Anonymi*

Now, how do the Bellermann texts fit within that overall picture of handbooks on harmonics, handbooks on 'music' with a more practical leaning, and practical beginners' '*Musics*'?

3.1   *Content, Headings, Definitions*
Let us start from the headings or initial definitions of the up to five supposed excerpts (which I will subsequently refer to as BA1 through BA5). Above the first, or the entire collection, one of the manuscripts provides the heading τέχνη μουσικῆς (§ 1). Judging from the term *tekhnē*, this heading is more likely to belong indeed here than to have developed from the *explicit* of the preceding text, the work of Aristides Quintilianus. The text itself does not start with

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not have copied the *hormasia* if he was working with the compilation that contained it? On balance, the 'μουσική' of *Vat.* gr., which precedes a scholion to Ptolemy's *Harmonics*, may rather belong with 'Πτολεμαίου μουσικά', the heading of a table related to Ptol. *Harm.* 3.16 (cf. Hagel 2005).

either a definition or an introduction, but plunges right into a discussion of rhythms from a very practical viewpoint.

The second text is set apart by the indication ὅρος μουσικῆς, "definition of music", and indeed it starts with two alternative definitions of music, one as an *epistēmē*, one as a *hexis* (§ 12).

A similar definition marks the beginning of the third text, which once more starts from μουσική ἐστιν ἐπιστήμη (§ 29).

The fourth text does not define music as such, but still begins with τῆς μουσικῆς ἐπιστήμης (§ 66).[16]

The fifth, as we have said, duplicates the first one with some variation. However, it is furnished with a different heading: περὶ μελοποιίας, "on melodic composition", which fits most of its content well (§ 83).

From this viewpoint, therefore, the entire collection places itself with the more practical texts, such as Bacchius and Alypius. The contents confirm such an ascription, while partially suggesting a much closer association with musical practice than any of those that are better transmitted. One particularly fascinating thread that connects the Bellermann texts with Alypius is the idea of harmonics being 'partitioned' into fifteen keys, in a blatant misapplication of Peripatetic scientific language inherited from Aristoxenus. Above we have quoted the respective passage from Alypius, which is less conspicuous because it is preceded by the traditional partition into seven chapters and might thus merely appear a slightly odd terminological shorthand.

But BA4, in a rapid move from the initial definition of music to detailing the notes of the natural scale, shows that this perplexing view of the keys as pseudo-categories forms a tradition of its own:

> Τῆς μουσικῆς ἐπιστήμης πολυμεροῦς ὑπαρχούσης μέρος ἐστὶν ἡ ἁρμονική, διαιρεθεῖσα εἰς τρόπους πεντεκαίδεκα, ὧν πρῶτος λύδιος (§ 66).

> While the science of music has many parts, one of these is harmonics, which is divided into fifteen keys [*tropoi*], of which Lydian is the first.

The other parts of music are listed in BA2, which then also moves on to harmonics. Interestingly the division into keys is here mentioned only in passing, the text focusing on the genera instead. This causes the first statement to stand out in an especially awkward manner, since it disrupts the flow of the argument instead

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16   Note that Najock changed his original preference to construe § 66 as a single sentence (Najock 1972, 114) to introducing a new paragraph (Najock 1975) in light of the independent tradition preserved in codex *Parisinus* gr. 360.

of supporting it, as it remains unclear how the two subdivisions might relate to each other. The ensuing clumsiness is just another token of the traditional nature of the prior claim, which the author apparently regarded as obligatory:[17]

> ἔστι δὲ τῆς μουσικῆς εἴδη ἕξ· ἁρμονικόν, ῥυθμικόν, μετρικόν, ὀργανικόν, ποιητικόν, ὑποκριτικόν. καὶ τῆς μὲν ἁρμονικῆς εἰς τρόπους δεκαπέντε διαιρουμένης ἴδιον τὸ περὶ τῶν τῆς μελῳδίας γενῶν διαλαμβάνειν, πόσα τέ ἐστι καὶ ποῖα ταῦτα, καὶ ὡς οὐ δυνατὸν πλείω γενέσθαι τριῶν, διατόνου τε καὶ χρώματος καὶ ἁρμονίας (§ 14).

> Music takes six forms, regarding harmonics, rhythm, metre, instruments, poetry and acting. For harmonics, in turn, which is divided into fifteen keys [*tropoi*], it is characteristic to distinguish the genera of melody, how many they are and of which kind, and that there cannot be more than three of them, diatonic, chromatic and enharmonic.

The names of the keys are never listed in BA2, but at the end the text returns to the topic, specifying which kinds of instruments would support which (§ 28). Is there something missing, or is that paragraph perhaps copied from another source? At any rate, it is another instance of distinctly practical information, as we would never find it in a conventional '*Harmonics*', but which makes perfect sense in a beginner's course.

BA3 mostly offers inconspicuous Aristoxenian material, save a paragraph on the "regions of the voice" (τόποι φωνῆς), which once more provides information that has survived nowhere else (§ 63f.).

Notation is employed in BA1‖5 and in BA4. In the former it permeates the text, while the latter includes a stretch of pure text between specifying the notation of the Lydian key at the outset and using it for various purposes at the end. But the text in between does not supply conventional harmonics either, as one might think at a cursory glance. After explaining the dichotomy of vocal and instrumental note signs, it enumerates the Perfect System and its notes, the sizes of the consonances, the tone and the two kinds of semitone a tuning in fifths and fourths generates. There is no sign of abstract science; nothing is here that we would not expect to form part of elementary musical training.

In one instance the terminology betrays its belonging to an almost eclipsed part of ancient musical studies. When describing the minor and major semitones, the text calls the latter *komma*, in opposition to almost all other sources,

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17   Note that Martianus Capella (9.935) also precedes the traditional chapters of harmonics with an account of the keys (*tropi*).

which use this term instead for the minute difference between the two kinds of semitone, while calling the larger *apotomē*:

τὸ μὲν μεῖζον κόμμα καλοῦσιν οἱ μουσικοί, τὸ δὲ ἔλαττον λεῖμμα.

the *mousikoi* call the larger '*komma*', the smaller, '*leimma*'.

In the present standard edition, Dietmar Najock has changed the text to μεῖζον κόμμα⟨τι ἀποτομὴν⟩, "call the one that is larger by a *komma* '*apotomē*'", in a desperate attempt to bring it into accord with accepted terminology. But this hardly creates a convincing reading in the first place: since the *komma* has not been mentioned, let alone defined, before, it cannot be expected to be introduced in such an implicit manner, and anyway the course of the argument requires references to 'the larger semitone', not 'the semitone that is larger by a *komma*', which, albeit correct, would leave the reader puzzling whether there is another semitone that is larger by a different amount. At any rate, the manuscripts' reading is vindicated by a remark in codex *Vaticanus* gr. 192, fol. 224r, which Théodore Reinach had long seen bears on the present passage:[18]

καὶ καλεῖται παρὰ μὲν τοῖς γεωμέτραις μουσικοῖς τὸ μὲν ἐλάχιστον τμῆμα τοῦ ἡμιτονίου λεῖμμα, τὸ δὲ μεῖζον κόμμα, ἡ δὲ ὑπεροχὴ τοῦ κόμματος πρὸς τὸ λεῖμμα ἀποτομή· πάλιν δὲ καὶ τοῦτο, τοῦ τε λείμματος καὶ τοῦ κόμματος τὰ ἡμίση διέσεις· παρὰ δὲ τοῖς Πυθαγορίοις, τὸ ἐλάχιστον τοῦ ἡμιτονίου, ὅπερ οἱ γεωμέτραι λεῖμμα προσαγορεύουσι, ποτὲ μὲν λεῖμμα, ποτὲ δὲ δίεσις λέγεται, τὰ δὲ μεῖζον ἀποτομή, κόμμα ἡ ὑπεροχὴ τοῦ τόνου πρὸς τὰς δύο διέσεις.

And by the music-geometers the smallest semitone-chip is called *leimma*, the larger, *komma*, and the difference between *komma* and *leimma*, *apotomē*; and again this: the halves of both *leimma* and *komma*, *dieseis*. But by the Pythagoreans, the smallest semitone-chip, which the geometers term *leimma*, is sometimes called *leimma*, sometimes *diesis*, but the larger one *apotomē*; *komma*, the difference between a tone and two *dieseis*.

Not only does the scholion corroborate the existence of such an 'inverted' nomenclature, it also echoes BA4's ascription to '*mousikoi*', more specifically calling them '*geōmetrai mousikoi*'. Their identity eludes us,[19] but it may be

18   Reinach 1897, 318f.
19   While the *Division of the canon* argues on a purely arithmetical basis, even if accompanied by (two-dimensional) diagrams, a closer association between music and geometry

significant that it is their view that is quoted in BA4, which, as we shall see, may have the strongest claims on the title *mousikē* in Gaudentius' sense.

One may wonder whether the unusual nomenclature for intervals larger than the fifth might also be a token of educational practice. Instead of label-ling the octave as *diapasōn* and the larger concords as 'octave plus fourth', 'oc-tave plus fifth' and 'double octave', BA4 continues to count steps in analogy to *diatessarōn* for the fourth and *diapente* for the fifth, calling the octave an 'eighth' and talking about an 'eleventh', a 'twelfth' and even a 'fifteenth' (διὰ ὀκτὼ καὶ ἔνδεκα καὶ δώδεκα καὶ δεκαπάντε: § 74). While from the viewpoint of harmonics it is the composite nature of those intervals that is of interest, as is the special status of the octave, on a many-stringed (but non-modulating) edu-cational instrument the intervals in question would primarily be determined by counting strings. Indeed such an instrument was not only available but ap-parently widely current in the second century CE, when Ptolemy made sure his tables would accommodate not only the tunings of the cithara but also those of the fifteen-string *lyra* spanning precisely a double octave.[20]

3.2   *'Solmisation'*

Subsequently, BA4 specifies the well-known ancient 'solmisation', which basi-cally works by expressing different functions within the tetrachord by different vowels. It is also transmitted by Aristides Quintilianus, who uses it to ascribe gender values to individual notes, taking the sound of the respective vowels as a starting point.[21] It has recently been argued that BA4 might draw on Aristides, who in turn may have invented or at least misrepresented the system:

> The curiously casual turns of phrase in the passage ('I have made a selec-tion', 'turned out to be useful', 'we adopt') suggest that Aristides is formu-lating, at least to some degree, his own idiosyncratic view of the matter rather than presenting a generally recognised scheme of vocabelisation
>
> D'ANGOUR 2016, 278

The question whether we have here two independent witnesses to a wide-spread ancient practice or perhaps only some idiosyncratic expression of a philosophic agenda is of the highest importance for the present investigation;

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       appears indicated in the title of a work by Panaetius, "On geometrical and musical ratios and distances" (Porph. *In Ptol. Harm.* p. 65.21-3 Düring εἴρηται δὲ καὶ Παναιτίῳ τῷ νεωτέρῳ ἐν τῷ Περὶ τῶν κατὰ γεωμετρίαν καὶ μουσικὴν λόγων καὶ διαστημάτων…).

20   Ptol. *Harm.* 3.1, p. 83.7-9 Düring τοὺς ἐν τῇ λύρᾳ δεκαπέντε τοῦ δὶς διὰ πασῶν μεγέθους. The identification of that instrument is problematic; cf. Hagel 2009a, 77-80.

21   Aristid. Quint. 2.13f., pp. 77.30-80.6 W.-I.

therefore the arguments for the latter view deserve careful examination. Unfortunately, they appear to have been crafted from a translation that does not aim at preserving those nuances that are at stake. Actually "I have made a selection" is plural in the original (ἐπελεξάμεθα). Aristides may well use the plural for evoking the discourse with his readers (e.g., 1.10, p. 20.1 W.-I. τανῦν δὲ περὶ τόνων λέγωμεν, "let us now talk about the *tonoi*"), but this is clearly not the case here. On the other hand, Aristides by no means eschews the first person singular (cf. only his preface), and knows how to contrast the plural of dicourse with the authorial singular (e.g., in the preface to his third book). Otherwise the plural is used to embed both author and reader within a common context of cultural practice and scientific tradition. One example may suffice for the latter, where the present instead of future tense shows that Aristides does not talk about his text in particular, but about the science in general:

> μέρη δὲ ῥυθμικῆς πέντε· διαλαμβάνομεν γὰρ περὶ πρώτων χρόνων, περὶ γενῶν ποδικῶν, περὶ ἀγωγῆς ῥυθμικῆς, περὶ μεταβολῶν, περὶ ῥυθμοποιίας (1.13, p. 32.8-10 W.-I.).

> The science of rhythmics has five parts; we discuss separately: primary durations; genera of feet; rhythmical tempo; modulation; rhythmical composition.

On cultural practice, an instructive example is Aristides' description of the types of voice movement:

> ἡ μὲν οὖν συνεχής ἐστιν ᾗ διαλεγόμεθα, μέση δὲ ᾗ τὰς τῶν ποιημάτων ἀναγνώσεις ποιούμεθα... (1.4, p. 6.4f. W.-I.)

> The continuous [voice movement] is the one in which we talk, the inter-mediate one that in which we recite poetry....

Therefore the 'we' in the passage in question most likely also refers to the cultural tradition which has selected suitable vowels for each note; and 'turned out to be useful' quite naturally refers to the same process—while the 'casual turn' is once more present only in the translation and hardly in the original aorist ἐχρησίμευσεν. Finally, 'we adopt' does not represent any Greek first person at all. Instead, it translates the passive παρατίθεται, which cannot possibly refer to Aristides' own choice, but only to a pre-existing practice.

On balance, everything suggests that Aristides refers to an existing system; and in fact among his original readership his argument would not have been

able to stand without resting on such a commonly recognised basis.[22] On top of this, a closer reading of BA4 confirms that this text cannot actually have derived from Aristides:

> τῶν δεκαπέντε τρόπων οἱ προσλαμβανόμενοι λέγουσι τῶ, αἱ ὑπάται τᾶ, αἱ παρυπάται τῆ, οἱ διάτονοι τῶ, αἱ μέσαι τε, αἱ παράμεσοι τᾶ, αἱ τρίται τῆ, αἱ νῆται τᾶ (§ 77).

> Of the fifteen keys [*tropoi*], the *proslambanomenoi* say 'tō', the *hypatai* 'ta', the *parypatai* 'tē', the *diatonoi* 'tō', the *mesai* 'te', the *paramesoi* 'ta', the *tritai* 'tē', and the *netai* 'ta'.

The manuscripts unanimously have neither οἱ προσλαμβανόμενοι λέγονται, "the *proslambanomenoi* are pronounced", nor τοὺς προσλαμβανομένους λέγουσι, "they pronounce the *proslambanomenoi*", as one would certainly expect. The actual wording is so curious that the assumption of a textual corruption appears out of the question: what we read is definitely the *lectio difficilior*. But then, the preserved text can also not be understood in any of the 'more natural' ways. Clearly, though this appears without parallel, the notes of the Perfect System are supposed *to talk*.

I can imagine only a single cultural context in which such a way of expression makes perfect sense, and this is once more musical education. "Listen",

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22   It may be important to note that ultimately D'Angour's general argument would not find support in a deconstruction of the ancient 'solmisation' system as we have it. What D'Angour appears to have in mind is the existence of an analogous system, but using enharmonic tetrachords, not the diatonic that both Aristides and BA4 presuppose: a system which in some way might permit to draw inferences about compositional practice some six centuries earlier (if scientific counter-evidence from the period in between is dismissed: D'Angour 2016, 282 n. 21). Therefore he draws on linguistic data about pitch differences in different vowels in modern spoken languages and argues that similar differences in ancient Greek would have reflected the 'quartertones' of enharmonic, but not the tones and semitones of diatonic. However, the relevant figures turn out to be wrong by almost two octaves: the "mid-range of vocal pitch" in human speech is not "between $a=425$ and $a=440$" (D'Angour 2016, 275), but around 120 Hz for males and 220 Hz for females (almost an octave higher in song, but the relevant data are all from studies on speech). A pitch difference in speech of 25 Hz as quoted by D'Angour thus translates to 190 cents or almost a tone even for females—who are hardly the right focus when looking back to classical Athens—and to 330 cents or a comfortable minor third for males (in song, it would still be more than a tone for males). Consequently, on the basis of the presented data it cannot be concluded that vowel-based vocalisation would fit an enharmonic musical environment any better than the diatonic for which it is exclusively attested.

says the music teacher, playing the lowest note on the instrument, "the *pro-slambanomenos* says 'tō'" (actually, in Aristides this particular note would say 'te', but this does not concern our argument). And so on, through the tetrachords, until a firm association between the degrees of the diatonic scale and the vowels is established the student's brain, and she is finally able to 'hear' what the strings 'say'. It seems that BA4 is still so close to the classroom that it has preserved the actual words used there.

Considering such an environment, Aristides' tenets suddenly appear in a very different light. Far from construing a lofty intellectual game, his ideas must have strongly resonated with everybody who had received musical schooling. If the association of notes and vowels had become culturally hardwired, all Aristides had to add to the picture was where each of the vowels 'felt' to belong in the spectrum between the extremes of male and female; and for this task he was confident to rely on commonly shared experience, bolstered by Greek inflection patterns (2.13).

3.3   *Numerical Scales*

In BA4, a diagram of solmisation syllables attached to the note signs of the Lydian Perfect System is followed by another diagram detailing only the notes of the Lesser Perfect System, accompanied by numbers indicating the intervals (§ 77); a few more notes from the Greater Perfect System seem also to belong here, even though they appear in the manuscripts only after the next paragraph and are supplied with wrong numbers (§ 79).[23] The purpose of those numbers appears mysterious. Since they increase with pitch, they cannot have been used for demonstrating the scale on a monochord (or any other experimental instrument, for that matter), where larger numbers are always associated with lower pitch. On the other hand, the semitones are expressed not by the expected *leimma* of 256:243, but by its approximation of 19:18 (cf. § 75),[24] even though this yields a disgusting ratio of 64:57 for one interval in the tetrachord. In this way, the scale falls short of any philosophical pretence, providing neither the pure ditonic diatonic sanctioned by Plato's *Timaeus*, nor a neat superparticular-only solution as suggested by other theorists from Archytas

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23   They have been interpreted as wrongly calculated (Bellermann 1841, 83) or wrongly supplied from § 96 (Najock 1972, 131-3); see the discussion below.

24   The number for the highest semitone Θ∨ is corrupted: the manuscripts have υλε, "435", instead of the expected υε γ′, "405 1/3". For an irregular 1/3 within a row of integers cf. *Exc. Neap.* 24, p. 419.2 Jan. Cf. Hagel 2009a, 166, with mistaken criticism of Najock's reconstruction of the text history.

down to Ptolemy.[25] On the upside, it avoids large numbers: not to exceed 512 within the range of an eleventh while cheating only once is a feat rivalled only by Didymus' solution. Obviously, therefore, it is also not an inept attempt at interval mathematics. Is it also a school exercise, designed for acquainting the students with the basic procedures of interval mathematics without involving unwieldy figures? After all, the series is calculated most easily on the basis of fourths (4:3), whole tones (9:8) and the approximate semitone (19:18), perhaps taking some shortcuts by octaves (2:1) and fifths (3:2). The aesthetically alarming ratio of 64:57 never turns up as such, as long as one does not set out to derive it from the results.

3.4 *Melody and Rhythm*

The following paragraph provides names for conjunct melodic movement, both upwards (*agōgē*) and downwards (*analysis*). While a harmonic treatise would stop at that, our text goes on to instructing about their execution:

> τὰς ἀγωγὰς καὶ τὰς ἀναλύσεις δεῖ μελῳδεῖν ἐκτείνοντας μᾶλλον καὶ μὴ βραχύνοντας τοὺς φθόγγους· ἡ γὰρ ἔμμονος αὐτῶν καὶ ἐπιμηκεστέρα ἐκφώνησις ἀκριβεστέραν τῇ ἀκοῇ χαρίζεται τὴν κρίσιν.

> One needs to play *agōgai* and *analyseis* by protracting the notes rather than shortening them; it is a stable and extended enunciation that allows the hearing to judge with greater accuracy.

And indeed the paragraph is complemented[26] by an extended list of *agōgai* and *analyseis* spanning a fourth, proceeding from the bottom of the Lydian Perfect System to its top and back (§ 80f.). The preceding remark leaves hardly any doubt that these are intended as exercises. In contrast to the earlier diagrams, in which all the notes were specified by both the instrumental and the vocal signs, here the instrumental notation is used exclusively: another token that these are practical exercises and not lists of theoretical constructs. After the fourths, at least one more table with fifths is lost; we do not know what it may

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25   Cf. Hagel 2009a, 158-216.

26   Najock (1972, 133), following a suggestion by Vincent (1847, 196), appears to regard the text as secondary to the note tables, arguing from *analysis* being no counterpart of *agōgē*, but of *synthesis*, which appears in the heading of the first table (§ 80). This solves problems, but is it likely in view of the authoritative tone of the text? In any case, *-lysis* is inconspicuous as a term for melodic downwards movement; cf. *eklysis* (Bacch. 37, p. 300.17-20; 41, pp. 301.20-302.2 Jan; Aristid. Quint. 1.11, p. 28.1-7 W.-I.).

have looked like. With this lacuna, BA4 might break off, while BA5, the text
that duplicates BA1, is introduced by its new heading "On melodic composi-
tion" (§ 83 || § 1, with different heading). Curiously it starts from a definition
of rhythm, which is not normally considered part of *melopoiia*, and this defi-
nition also deviates from other sources by mentioning not just *arsis* and *the-
sis*, 'weak' and 'strong', as its constituents, but including also rests: "the time
that some call 'empty'". From the viewpoint of ancient rhythmical science this
would appear to be wrong, as rests would normally fill, or be part of, either an
arsis or a *thesis*—they are marked in this way in the musical documents, and a
table of rests of various durations analogous to those of notes on the last page
makes it clear enough that the text does not talk about some extra-rhythmical
additional time between periods or cola (§ 102). However, it is once more pos-
sible at least to speculate about a deeper meaning in the awkward wording,
once we appreciate a practical background. I have argued in another context
that the origin of the ancient notion of rhythm consisting of "ups" and "downs"
(ἄνω and κάτω) might most plausibly be sought in the tradition of lyre instruc-
tion, where these would, at least on a basic level, correspond to the movement
of the plectrum producing stronger downwards and weaker upwards strokes
much as on a modern guitar.[27] In such a context, it would be perfectly natural
to distinguish between upward strokes, downward strokes and silence, reflect-
ing the way guitar strumming patterns are often notated.

There follows the rhythmical notation of multiple time values, then a list
of melodic movements involving one or two notes (§§ 2 || 84), a remark on
the notation of *arsis* and *thesis* by dots (*stigmai*) on the former, on music that
does not lend itself to rhythmical notation at all (§§ 3 || 85), and finally the de-
scription of the melodic movements listed before, including the way they are
notated, completed by a description of the *diastolē*, a separation mark used in
musical notation (§§ 4-11 || 86-93).[28] Here BA1 stops, while BA5 adds a remark
about the gamut of the human voice, describing it in terms of the Lydian scale
(§ 94). The following sentences about non-rhythmical song and the nature of
time read rather like glosses (§ 95).

The rest are tables and brief melodies. Another Lydian scale with num-
bers appears to represent the Greater Perfect System (§ 96); however, the two

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27   Hagel 2017, 204f. On rhythmical notation in general, Winnington-Ingram 1955, 73-87; West
       1992, 266-9; Pöhlmann 1995, 1663f.; Pöhlmann/West 2001.
28   For reconstruction and analysis of this section cf. Najock 1972, 161-82. While Najock
       searches for remnants of the lost sign in the concluding punctuation, I wonder whether it
       might hide within the last word instead: does ἔστι δὲ αὐτῆς σημεῖον τόδε go back to ἔστι δὲ
       αὐτῆς σημεῖον τὸ ꛤ, the *diastolē* sign being misunderstood as representing the shorthand ꛤ
       for δὲ, without the accent? Cf. Groningen 1940 Fig. 15; Pöhlmann 1975, 483.

highest notes are missing from the single manuscript that still preserves this section. We have mentioned the table of rests of different durations (§ 102); another specifies the ratios of important intervals (§ 103); and finally six notated melodies exemplify various rhythms (§§ 96-101; 104).[29]

3.5   Relation between Anon. Bell. '4' and '5'

Almost all of BA5 is thus once more of eminently practical character, closely resembling BA4 in this respect. In fact, the two sections complement each other. BA5 uses melodic notation without introducing it, while BA4 introduces pitch notation without going into matters of rhythm or phrasing. Similarly, BA5 presupposes the knowledge of the solmisation vowels that are described in BA4. Most importantly, while BA5 details eight types of melodic progression or phrasing, it does not mention simple ascending and descending motion, which are the final topic of BA4. And just as BA4 switches to instrumental notation only when providing examples for those types of movement, BA5 also specifies all examples in instrumental signs, using the double notation only for the numeric representation of the Greater Perfect System, which appears to complement the Smaller Perfect System of BA4 (§ 77), following the same unusual approach of associating lower numbers with lower sounds.

Moreover, BA4's remark on protracting the notes in continuous movement makes much more sense when viewed in contrast to the melodic figures detailed in BA5. Though we are not told the specifics of their intended execution, terms such as *prolēpsis* "taking forwards/before", *eklēpsis* "taking out" etc. may imply subordination.

On balance, it appears more than likely that BA4 and BA5 belong together, in spite of the intervening heading, which may have originated as a marginal note. There seems to be no doubt that the archetypus already contained both.[30] In combination they offer a comprehensive if succinct introduction to musical notation, centred on the Lydian key. Once more we cannot know whether a complex diagram of all keys has fallen victim to the copyists' dismay, as did that given by Aristides. As regards the text of BA1, it would have been copied to the archetypus from another source, with considerable variation in detail.

3.6   Educational Context

Some questions remain. One concerns the two scales expressed by numbers. Firstly, they are not found in immediate succession. Secondly, while the first operates with an approximated smaller semitone of 19:18, the second uses the traditional 'correct' value of 256:243. On the other hand, the two tables share

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29   Cf. Pöhlmann/West 2001 no. 32-37; Hagel 2008a.

30   Cf. the lucid discussion in Najock 1972, 58: "Die §§ 83-104 standen also im Archetypus".

a very unusual feature: in both the numbers are chosen in a way that all notes except one can be expressed in integers; the remaining one would need to include a fraction.[31] Although the fractions are not preserved in the manuscripts and we can therefore not know whether they had originally been written, the fact that exactly one note per table did not work out properly deserves attention—this could have been avoided by multiplying the first table by three and the second by two. Are we witnessing the same approach on educational optimisation, preferring a single fraction of a very simple sort to dealing with numbers twice or thrice as large overall—perhaps even deliberately including a small exercise on fractions? Or is this only a coincidence?[32]

Be that as it may, the pedagogical context stands out clear enough in BA1/5, most obviously where solmisation is employed for expressing the distinctions between different kinds of musical phrasing by the difference between the consonants *t* and *n* as well as their combination *-nt-*. Here the examples are introduced by λέγομεν οὕτως (§§ 9f. ‖ 91f.), a manner of expression that must have originated in an environment of musical education. Another instance may be so singularly school-like that editors from the Byzantine period on have failed to appreciate it, preferring to do violence to either the text or the language. The two versions read as follows:

Προκρούσεως δὲ γενομένης ἐκ τοῦ διὰ πασῶν κομπισμὸν ποιεῖ (§ 10).

When there is a *prokrousis* over an octave, makes a *kompismos*.

Προκρούσεως δὲ γενομένης ἐκ τοῦ διὰ πασῶν κομπισμὸς γίγνεται (§ 93).

When there is a *prokrousis* over an octave, a *kompismos* results.

The second version appears to make perfect sense. A *prokrousis* is an ascending sequence of two notes, probably not involving the shortening of their time

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31   In § 96, the second number would need to read τξδ ∠, "364 ½". For § 75 cf. above, n. 24.

32   In § 77, the 'mistake' might be explained by the hypothesis that the numbers for the Lesser Perfect System are in fact adjusted from a representation of the Greater Perfect System, where the scheme would work out flawlessly: 192-216-228-256-288-304-342-384-432-456-512-576-608-684-768. Has such a Greater System been lost before the Lesser Perfect System of § 77, perhaps because it appeared to duplicate the preceding solmisation scale? But this would still not explain the parallel flaw in § 96. Here one would need to assume that the scale originally did not extend below *parypatē hypatōn*—a hypothesis for which I can see no possible argument.

values below the equivalent of a short syllable. A *kompismos* is previously exemplified as a sequence of two identical notes, apparently pronounced as, e.g., *tōntō* or *tanta*, i.e., with a more conspicuous staccato than the *melismos* (*tōnnō*, *tanna*). The text therefore seems to say that whenever the melody rises by an octave in close connection, the effect is automatically something like a soft staccato. On second thought, such a notion must however appear doubtful. Otherwise the distinctions appear to reflect deliberate preferences in performance (which is why they would be notated at all), while a remark about something that would happen automatically is at least surprising—all the more so, since it is not *a priori* obvious why an octave jump might not be made to sound like, for instance, *tōe* or *tōte* just as well as *tōnte*. More importantly, the version of BA1 is not Greek. The conventional interpretation of "this makes a *kompismos*"[33] cannot be reconciled with the absolute genitive instead of a nominative (πρόκρουσις δὲ γενομένη ἐκ τοῦ διὰ πασῶν κομπισμὸν ποιεῖ); the construction is actually so unnatural that it can hardly be blamed on late antique or medieval incompetence—modern readers seem to have understood an impersonal construction as would be at home in their own languages but is alien to Greek. Consequently it is easy to see why a scribe would have changed the reading of § 10 to that of § 93, while the opposite procedure is not conceivable: the reading of § 10 is clearly the *lectio difficilior*. Anyway BA1 is supposed to be closer to an original wording (a notion that I take to be meaningful even for open texts).[34] Both the textual problem and that of the dubious meaning can however be solved by changing the Byzantine scribe's choice of accentuation:

Προκρούσεως δὲ γενομένης ἐκ τοῦ διὰ πασῶν κομπισμὸν ποίει (§ 10).

When there is a *prokrousis* over an octave, make a *kompismos*.

Turning the sentence into an advice not only salvages the syntax without changing a single letter, it also aligns the remark with its context: octave jumps of that kind ought to be set apart by a *kompismos* (even if actually notating a

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33   E.g., Najock 1972, 73: "Wenn eine Prokrusis aus der Oktave erfolgt ist, macht es einen Kompismos". Similarly I do not believe that the following ἑξῆς δὲ λέγομεν can mean "entsprechend artikulieren wir"; rather I think this remark may have originated as an abortive gloss to the term ἑξῆς in the following paragraph ("by 'in sequence' we mean ..."): somebody may have remembered that ἑξῆς is a central point in Aristoxenian harmonics and might merit a definition, but then realised that this harmonic usage is not connected with the present instance of the word.

34   Najock 1972, 185: "die sonst vollständiger und besser erhaltene erste Fassung".

kompismos was only customary between identical notes), obviously because the similarity of notes an octave apart demands demarcating them more clearly. Indeed the jump might be less apparent otherwise, since the first, lower note incorporates the harmonic spectrum of the second, higher note, so that the latter might easily be perceived as prolonging the former when only the lowest partial drops out without conspicuous articulation.[35] If these arguments are accepted, the imperative might be the strongest example of musical schooling we have preserved.

3.7   *Instrument*

Did this schooling involve a particular instrument? From Friedrich Bellermann on, it has been argued that the differentiation between different kinds of articulation when repeating a note would point to a wind instrument, and therefore most likely the *aulos*.[36] The consonants by which these articulations are described might thus directly reflect tonguing techniques, ranging from no perceptible tonguing (*tōa*) through softer (*tōnnō*) and stronger (*tōntō*) articulation up to a clearcut separation (*tōta*). On the other hand, the *aulos* may not appear a very likely instrument in a Roman-period upper-class context, given its centuries-old defamation in Platonist philosophy.

What internal evidence is there, apart from tonguing-like articulation? Firstly, the terms for melodic movement themselves may derive from instrumental practice. Four of them express the dichotomy between upwards motion and analogous downwards motion by contrasting the propositions *pro-* and *ek-* (*prolēpsis—eklēpsis*; *prokrousis—ekkrousis*). From a physical viewpoint this does not blend well with wind instrument experience, where forwards (*pro-*) means downwards. On the lyre, in contrast, the higher strings were indeed further away from the player, providing a natural association between "forwards" and "higher",[37] while *ek-* is easily understood as its opposition in the sense of "from" = "towards the deictic centre".[38] On the other hand, these terms may long have had become commonplace, and so need no longer imply any particular instrument in our context.

More evidence may be gleaned from the pitch ranges of the examples, since all of these are provided in instrumental notation—and in the Lydian

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35   Najock 1972, 173. This is true even for the *aulos*: in spite of its cylindrical bore that favours
      the odd harmonics, the spectrum of *auloi* reconstructed by the author has strong even
      partials as well; cf. Hagel 2004, 387 diagram 1.

36   E.g., Najock 1972, 175f.

37   Najock 1972, 171f.

38   In the musical terms *eklysis* and *ekbolē*, in contrast, the latter constituting a melodic *up-ward* movement, *ek-* may rather denote the departure from a basic scale; cf. Hagel 2000,
      59-70.

key (cf. Figure 1).[39] What are the scopes of the instruments in question? As we have said above, a full Lydian double octave of fifteen strings may be envisaged for the instrument that Ptolemy refers to as the *lyra*. A typical *kithara*, in contrast, spanned the gamut between *hyperypatē* ΦF (*D*) and *nētē diezeugmenōn* ϴЧ (*e'*),[40] potentially including modulating strings, and being capable of playing an octave higher by producing harmonics.[41] *Auloi*, finally, came in different sizes and scales; but there is excellent reason to believe that the Lydian key was used for notating the Perfect System of a widespread type, regardless of its absolute pitch—what we nowadays call 'transposing' instruments.[42] Without overblowing, such instruments would have played within the eleventh from *proslambanomenos* 7⊢ (*A*) to *nētē synēmmenōn = paranētē diezeugmenōn* Ս⅃ (*d*). The single preserved Hellenistic flute (*plagiaulos*)[43] is also most straightforwardly interpreted as not playing in a specific key within the system of *tropoi*. In transposing Lydian notation, it ranges from *parypatē hypatōn* ᴚ⅃ (*c*) to *netē synēmmenōn = paranētē diezeugmenōn* Ս⅃ (*d*) in the lower register, and considerably higher with overblowing.

     In comparison, the notated examples in BA4+1/5 fall in three categories. The majority ranges down to the lowest possible note, ⊢. This is true for the ascending and descending fourths (§§ 8of.), for a chart of seven examples for *prolēpsis* found only in BA5 (§ 86), and for five out of six of the final pieces. In contrast, the examples for melodic movements, as far as they are part of the running text, all start from F (*D*) upwards. One of the instrumental pieces, finally, uses the octave from ⅃ (*C*) up to Ս (*c*). Only this last one would reasonably coincide with the flute range; but as it also falls within that of the *aulos*, the flute appears to be ruled out. More interestingly, the in-text examples seem curtailed for the *kithara*, the only instrument we know that typically sported this specific bass note. The extra chart of § 86, however, goes a fourth lower. Most probably, therefore, the original creator of our 'schoolbook' incorporated a section from a text that was focused on the *kithara*, or which made sure the examples fitted all instruments in question, but expanded it with a larger chart of examples, starting right at the bottom of the scale.

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39   Regarding Figure 1, note that the *aulos* from Pompeii is of course not a *proslambanomenos aulos* but a modulating instrument playing in well-defined keys (Hagel 2008b; Hagel 2012). I have nevertheless included it to show that such professional instruments may share structural characteristics with simpler ones. Note especially the overall gamut of an eleventh as well as the distribution of tones and semitones at the lower end that allow practising the bass-range exercises from *Anon. Bell.*

40   I transcribe the diatonic Greater Perfect System as: *A B C D e f g a b c d e' f g' a'*.

41   Cf. Hagel 2009a, 122-34.

42   Hagel 2009a, 332-43; Hagel 2010.

43   Psaroudakes 2010; Terzēs 2014.

This seems to leave us with the *lyra* and the *aulos*. The latter appears problematic with regard to the ascending and descending fourths. Not only does no known instrument include the required double octave, it is also hardly credible that such a large instrument would have been used in school. On the other hand, one specific detail appears to exclude a fifteen-stringed *lyra*: at the position where four adjacent notes in the Greater Perfect System would span a tritone instead of the fourth, the table modulates into the Lesser Perfect System instead, using *tritē synēmmenōn* ⊔ (*b♭*) instead of *paramesē* ⊏ (*b*). On the *lyra*, this would require a sixteenth string, which is of course organologically possible, but conflicts with Ptolemy's statement. On top of this, no string-related music from the Roman period is ever found to use this particular note.[44] In fact it appears only in one fragment of instrumental music, which was apparently written for the *aulos*.[45] In this singular case we even seem to know the particular type of transposing *aulos*, because an unusual modulation coincides exactly with the design of the so-called Berlin *aulos*, as does the persistent usage of the highest note in all melodic contexts.[46] Being located high on the higher pipe on this kind of *aulos*, V (*b♭*) would however not correspond to a finger hole of its own, the distance between semitones in this region being smaller than that of the fingertips. In order to sound it, one would instead need to half-open the next higher hole (which when fully opened gives *paramesē* Z⊏).

The presence of the modulating note alone would not establish a plausible connection between our text and that kind of *aulos*—which, for most purposes that concern us here includes the Louvre *aulos*.[47] But there are a few more fascinating strands. The bass note of those diatonic *auloi* corresponds to the *proslambanomenos* 7⊢ (*A*) of their scale (whence I have dubbed them '*proslambanomenos auloi*').[48] From there, one of the pipes reaches up an octave to *mesē* I< (*a*), the other an eleventh to *nētē synēmmenōn* ⊔ ⌐ (*d*). The next higher note, *nētē diezeugmenōn* ⊖ᴎ (*e'*), is available by overblowing. The Berlin *aulos* in particular, one of whose pipes is a semitone shorter than the other, provides one more note by overblowing that shorter pipe to *tritē hyperbolaiōn* ⅄⊢ (*f'*). The melodic range of those transposing instruments might be notated as running from 7⊢ (*A*) up to ⊔ ⌐ (*d*), completing the Lesser Perfect System with half-stopping, or playing the lower part of the Greater Perfect System without

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44   Hagel 2009a, 95f.

45   *P. Mich.* 1205 = Pöhlmann/West 2001 no. 61.

46   Hagel 2009a, 319-23; Hagel 2010.

47   Bélis 1984; Hagel 2004; Hagel 2014.

48   Hagel 2009a, 332-43.

the entire tetrachord *hyperbolaiōn*, or, in the case of the Berlin-instrument type used with overblowing, from �7├ (*A*) up to 𝝀├ (*f'*).

Curiously, these are exactly the ranges we find in our text—more precisely, in the manuscripts, since the editors have tended to tamper with the evidence, restoring what they thought were the required 'full' diagrams. In § 77 we find the Lesser System (explicitly headed as such). Subsequently § 79 supposedly tried to supply the missing notes from the Greater System; but the manuscripts actually contain only an alternative higher end, indeed using the notes of the Greater System, but not exceeding the range of the Lesser System—and therefore that of the *aulos* fingerholes.

Later, § 96 appears to provide a full Greater System; but here the two highest notes are missing, leaving us with the range from �7├ (*A*) up to 𝝀├ (*f'*)—which is identical with the melodic range of the Berlin *aulos*. Notably, this chart is not introduced by a corresponding heading that would announce the Greater System. The editions, however, do not even tell us the whole story; this is one of the cases where the manuscript—in this case we have the archetypus—needs to be consulted.[49] There it becomes evident that its model can hardly have had more notes: there would have been ample space, and the scribe distributed the final two note pairs generously, after having cramped the preceding ones closely together, up to ∪Ɫ. What is even more important, he seems to have had a reason for that. Those two highest notes, ϴ⋀ and 𝝀├, are carefully arranged beneath each other and their corresponding numbers, in clear tabular format, at the left margin of the page. Not so the preceding chart. Here the same scribe has clearly failed to understand the layout, copying first the figures in three lines, the first of which runs on from the preceding text, then the vocal and the instrumental notes up to ∪Ɫ in one line each, but without taking care about their vertical correspondence (and misplacing the labels '*mesē*' and '*paramesos*').[50] Manifestly, the scribe considered the parts up to and beyond ∪Ɫ to be distinct entities. Notably, there would have been room for one or two more numbers following that for ∪Ɫ, but still the scribe would not continue the list there. The conclusion seems inescapable that the two parts of the chart were clearly separated already in his model. The fact that in the second part only two notes survive, in spite of the considerably greater attention that its layout received, confirms our inference that the scale in the model had stopped here as well. The two notes that a Berlin-type *aulos* produces by overblowing must therefore have been distinguished from the rest already in the manuscript tradition preceding our *codex unicus*. This is all the more

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49   The page is available in Pöhlmann/West 2001, 221 pl. 9.
50   Cf. Vincent 1847, 173-6.

remarkable because such a layout contradicts the traditional structures of ancient harmonics, cutting right through the tetrachord *diezeugmenōn* and thus curiously detaching *nētē diezeugmenōn*, the highest note both of the cithara and of the 'central octave' of theory, from its natural environment.

Is all this just a coincidence? Starting from two meaningful upper notes on the *aulos* and fifteen notes in the Perfect System, the chances that two randomly cut charts (§§ 77+79 and 96) would both break off at one of the former might be taken to amount to only 1.8%. But then, not all fifteen notes are equally likely points of truncation. In § 79, a reasonable guess would be that each of the seven notes following the initial one might *a priori* have the same chances to be the last preserved, and that the same may be true for, say, the last ten notes in § 96. Thus we arrive at a more realistic estimate of 5.7%. In other words, the chances that the apparently incomplete charts are actually reflecting *aulos* ranges might be as high as 16:1, even without taking the extraordinary layout of § 96 into account. If we add the chances for an arrangement like that (a random break might have occurred before any of the last seven notes or so), our odds rise above 100:1.

On the other hand, though such ruminations are unproblematic in the case of § 96, the evaluation of § 79 is much more complex, other factors demanding palaeographical explanation as well. Dietmar Najock has argued quite persuasively that its erroneous numbers indicate not only that these were copied from § 96, but also that they must originally have included all the higher notes as well.[51] I think that Najock's general idea will not easily be refuted, since it
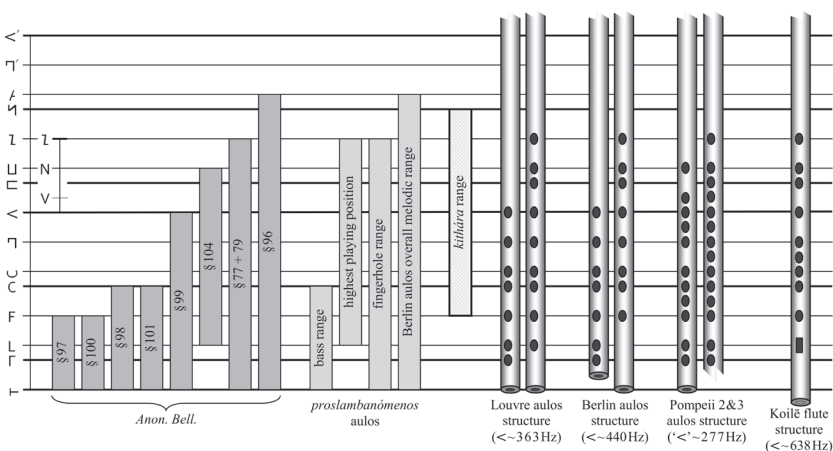
FIGURE 1   *Note ranges in Anon. Bell. as compared to the* proslambanomenos aulos (*see n. 39*).

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51   Najock 1972, 6of.; Najock 1975, XVIII.

also accounts for one or two errors in the numbers of § 77. However it might perhaps be adapted in a way that does not demand the loss of four numbers and eight note signs[52]—if one allows for even greater ineptness on the part of the creator of the extended chart than we need to attribute to him in any case. We would need to assume that whoever supplied the wrong figures started from a stage where the Lesser System of § 77 already contained the figures, as did § 96, and where the disjunct variant of § 79 (that ended up being copied to a wrong place as well) was not supplied with numbers (perhaps having lost them). In an effort to complete the chart, the missing figures would then have been copied from § 96 in the simplest and most naïve manner conceivable: by looking up the last number that was found in § 77 (φιβ, "512") and continuing from there, not even taking into account that the first and the last note of § 79, ∪⅂ (*d*), are identical with the last of § 77 and would therefore require the same number. At the same time, the copyist may have compared the preceding numbers as well and changed the last but one from υνϛ "456" to υπϛ "486" and inserted the λ from υλβ "432" into the last but two, which ultimately became υλε "435" instead of υε γ′ "405 1/3" (had these been poorly legible?), being finally satisfied to find that the next one, τπδ "384", was identical in both sequences.

It has long been noted that the rising table of fourths (§ 80) contains an anomaly that recalls a passage in Aristides Quintilianus:[53] the modulating note, which is required as a bounding note to avoid a tritone, occurs not only there but also in the next line, inside the fourth—though only in ascending, not in descending motion: ⅂<∨∪ ⅂∪ ∪⊏<⅂ ∪⅂ (*gab♭c gc cbag cg*). Going upwards through the tetrachord *synēmmenōn* but downwards through *paramesē* coincides precisely with the example Aristides gives for 'revolving' melody:

ἔτι τῆς μελῳδίας ἡ μὲν εὐθεῖα καλεῖται, ἡ δὲ ἀνακάμπτουσα, ἡ δὲ περιφερής, εὐθεῖα μὲν ἡ ἀπὸ βαρύτητος εἰς ὀξύτητα, ἀνακάμπτουσα δὲ ἡ ἐναντία, περιφερὴς δὲ ἡ ἐμμετάβολος, οἷον εἴ τις κατὰ συναφὴν τετράχορδον ἐπιτείνας ταὐτὸν ἀνείη κατὰ διάζευξιν (1.9, pp. 16.21-17.2 W.-I.).

Regarding melody, then, one is called straight, another returning, a third one revolving. Straight, the one from low to high, returning, the opposite,

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52   The crossed-out symbols at the end of the text of codex *Florentinus Riccardianus* gr. 41, which Najock (1972, 61) proposes may be the traces of the lost note symbols do not really resemble them. Also, we would need to assume that those symbols would have been present, already crossed out, in the archetypus, from where they survived only into this manuscript, while being independently disregarded by all others.

53   Bellermann 1841, 86-8; Najock 1972, 139.

revolving, the one that involves modulation, e.g., when someone after moving upwards through the conjunct tetrachord moves downwards by the same amount in disjunction.

Notably, the anomaly is not repeated in the following line, where *paramesē* is used in both cases, so a copying error cannot be excluded.[54] However, the remarkable coincidence with Aristides cautions us from dismissing the evidence all too easily; after all, the error may have worked in the other direction as well.

But how would this particular melodic 'circular' movement be related specifically to the *aulos*? It is the sequence of modulating in upwards direction before modulating backwards in a downwards movement and not the other way round, going upwards within the basic scale before modulating in the downwards movement, that becomes significant as soon as one experiences its immense practical advantage on the instrument. As discussed above, the modulating note requires a partially open *paramesē* hole. This is achieved comparatively easily by pulling the middle finger upwards. As a consequence of the human capability of speech and song, the human ear is lightning-fast in assessing pitch differences and passing the relevant information on to the motor systems—primarily the vocal chords, but with some training also to the fingers of an instrumentalist. Opening a finger hole in the way described forms precisely such a smooth and controllable operation as is prerequisite for quickly establishing the correct pitch: since the hole itself exerts no friction on the part of the finger that covers it, the finger can be pulled away from its lower part even though the skin that rests on and above the upper rim of the hole does not move. Instead, it is drawn from the side of the finger to a position more underneath it, taking advantage of the flexibility of the fleshy parts. Playing the next higher note is straightforward as well, by lifting the finger while also opening the thumb hole (which is also done in an upwards-rolling motion). Half-closing an open hole, in contrast, is an entirely different story. When the finger has been lifted from the hole, as it normally is in woodwind playing, any attempt at half-stopping by dropping it only over the upper part of the hole will result in an ill-predictable pitch that will need adjustment in a secondary sideways movement, in a procedure that almost certainly consumes more time than fluent playing allows. On the other hand, if the finger is first brought to rest above the hole, in order to push it downwards, analogously to the upwards movement used for half-opening, this would need to be done against a much larger friction, because the finger now rests on wood. Consequently, it is not only much more difficult to roll the skin far enough to achieve the required

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54   This is the preference of Winnington-Ingram (1975, 418).

small semitone in the first place; it will also become almost impossible to continue the melody downwards, as this necessitates closing the hole entirely, starting from an already clumsy position.

Taking into account that of all musical fragments from the Roman Imperial period, the modulating note is only attested in a piece for *aulos*, it is very likely that such physical restrictions prompted the way in which Aristides phrased his example. If the preserved reading of the relevant line in BA4 can be trusted, it would establish another link between this text and the art of the *aulos*.

3.8   *The Musical 'Exercises'*

Finally, we need to address the musical examples or exercises at the end of the collection, which have already been acknowledged as "documents of musical education in antiquity".[55] It has been argued that they do not belong with the preceding text;[56] but where else would they belong then? Which text would be more likely to contain just such a kind of brief melodies than BA4+1/5, a booklet that had already once provided exercises in instrumental notation following the introduction of the Lydian scale and the concepts of conjunct movement, and which went on to detailing other aspects of notation such as rests, rhythmical notation and melodic figures? Would we not even expect to find examples also for these matters?

Clearly the short pieces exemplify the usage of rests as well as of rhythmical notation, at least in the form of two-time length marks and *arsis* dots. In spite of the various rhythms that the headings announce, and which have been tentatively reconstructed from the problematic evidence, the preceding text of BA5 offers no analysis of rhythmical structures. Apparently rhythmics as a science is not regarded as prerequisite to a practical musical education any more than is harmonics. For acquainting the students with various rhythms, it seems, the dots would suffice, laying the fundament for a deeper understanding in the course of later lessons in theory, for instance along the lines of Bacchius' handbook.

The sequence of the exercises is clearly disturbed, since the one written top left bears the heading 'another six-time', either referring to the 'six-time *kōlon*' at the top of the third column, with an odd shift of gender from neuter to masculine, or indicating that something has been lost, or perhaps referring to the 'four-time' beneath it, in which the same notes assume different rhythmical values, with a miscopied heading that should have read 'in another way:

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55   Pöhlmann/West 2001, 119.

56   Cf. above n. 2.

six-time'.[57] In any case, we cannot rely on the arrangement in the codex; in the following I will address the items in terms of musical complexity.

The simplest are the 'four-time' (§ 100, Figure 2) and the 'another six-time' (§ 97, Figure 3) pieces. They use merely the four lowest pitches of the Perfect System, each bar starting with the bass note followed by a different permutation of the other three. The first of these gives the notes in ascending order, identical to the start of the ascending table of fourths (§ 80). Apart from tying the exercises more closely to the preceding text, this raises the question whether those four-note etudes were perhaps also meant to be executed throughout the Perfect System. On the other hand, they demonstrate the practical relevance of this particular group of notes, forming a kind of 'first fourth'. This in turn sheds a more favourable light on a passage in Aristides Quintilianus' exposition of the 'solmisation':

> Τοῦ δὴ πρώτου συστήματος, ὅ ἐστι τετράχορδον, ὁ μὲν πρῶτος διὰ τοῦ ē προῆκται φθόγγος, οἱ δὲ λοιποὶ κατὰ τὸ ἑξῆς ἀκολούθως τῇ τάξει τῶν φωνηέντων, ὁ μὲν δεύτερος διὰ τοῦ ā, ὁ δὲ τρίτος διὰ τοῦ ή, ὁ δὲ τελευταῖος διὰ τοῦ ō, εὐπρεπῶς κατὰ τὸ πολὺ τῶν ἤχων δι' ἀμεσότητος ἀλλήλους διαδεχομένων (Aristid. Quint. 2.14, pp. 79.26-80.2 W.-I.).

> In the first *systēma*, which is a tetrachord, the first note is produced through the 'e', the others following the [alphabetic] order of the vowels: the second through the 'a', the third through the 'ē', and the last one through the 'ō', which makes sense because due to their substantial resonance they can follow upon each other without any intermission.[58]

FIGURE 2   *Anon. Bell. § 100 = DAGM no. 34.*

FIGURE 3   *Anon. Bell. § 97 = DAGM no. 33.*

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57   Westphal 1865, 190.

58   I take the last clause to provide a justification for selecting these vowels and no others from the alphabet: those that involve a considerable restriction of the resonating space in the mouth are excluded; as a result, the transition from one to another in solmisation

If related to the standard Aristoxenian sense of 'tetrachord' as a building block of the musical system, bounded by 'fixed' notes, this is of course wrong:[59] the higher of the four notes in question is not a fixed note, and the lowest interval is a disjunctive tone, by definition outside any building-block tetrachord. But why should the term 'tetrachord' not also have retained its old meaning of any set of four contiguous notes, or at least four such notes that are bounded by a fourth? After all, this is the sense in which Aristoxenus himself accepts the term: when referring to the standard shape specifically, he makes it very clear that it is only one of several forms of tetrachord, doing so in more than one way:

> αἱ δὲ τῶν γενῶν διαφοραὶ λαμβάνονται ἐν τετραχόρδῳ τοιούτῳ οἷόν ἐστι τὸ ἀπὸ μέσης ἐφ᾽ ὑπάτην, τῶν μὲν ἄκρων μενόντων, τῶν δὲ μέσων κινουμένων (Aristox. *Harm.* 2.46, p. 57.13-15 Da Rios)

> The differences between the genera are considered in such a tetrachord as lies between *mesē* and *hypatē*, with the outermost notes remaining stable, while those in the middle move around.

> τίθεται γὰρ ὁ τόνος ἐν τῇ διαζεύξει μεταξὺ τοιούτων τετραχόρδων ἃ οἱ περιέχοντες βαρύτατοί εἰσι πυκνοῦ (Aristox. *Harm.* 3.63, p. 79.12-4 Da Rios).

> The reason is that in conjunction the tone is put between such tetrachords of which the bounding notes are the lowest of a *pyknon*.

And in another place, he even makes sure to define that the kind of 'tetrachord' envisaged needs to span a fourth, evidently presupposing that his audience would have allowed for tetrachords including a tritone just as well:

> πυκνὸν δὲ λεγέσθω μέχρι τούτου ἕως ἂν ἐν τετραχόρδῳ διὰ τεσσάρων συμφωνούντων τῶν ἄκρων τὰ δύο διαστήματα συντεθέντα τοῦ ἑνὸς ἐλάττω τόπον κατέχῃ (Aristox. *Harm.* 2.50, p. 62.14-6 Da Rios).

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examples such as 'tōa', 'taē', 'tēō', 'tōe', 'tōē' (all in *Anon. Bell.* § 86) is smoother than would be possible with the excluded vowels ι and υ (whatever may be the case with ο). The same principle has been observed in recent 'acoustic-iconic mnemonic systems': cf. Hughes 2000, 105-6.

59   Cf. Barker 1989, 481 n. 131.

> Let us talk about a *pyknon* as long as, in a tetrachord in which the bound-
> ing notes sound the concord of a fourth, the sum of two of the intervals
> occupies a smaller range than the third one.

Aristides' "first *systēma*" thus acquires a twofold meaning. On the one hand,
it is 'primary' because the fourth is the smallest interval that can contain a
systēma;[60] hence the explanatory phrase "which is a tetrachord". On the other,
it is the 'first' because of its position at the lower end of the system, which
made it the first to be encountered in the exercises of BA4+5, and therefore
not unlikely the first that Aristides himself had encountered in the classroom.

As an *aulos* exercise, the same 'first tetrachord' is of eminent importance be-
cause the bass notes on the instrument demand the most formidable finger
span—note that on the relatively small Louvre instrument, many players still
find it difficult even to play the highest notes on the lower pipe. In this respect it
may be little surprise that all but one of the exercises in BA5 use a scale from the
bass note upwards: whoever managed to play that would not find much diffi-
culty with the higher notes, other than having to learn to use the thumb as well.

Two other pieces extend the range to a fifth, including also *hypatē mesōn*
Ϲ (*e*). One of them is labelled as being in 'eight-time', but this cannot be recon-
ciled with the notes as we have them (§ 101, Figure 4). Of the restorations I have
considered,[61] Figure 4 provides that which is perhaps most satisfactory from a
palaeographical viewpoint, though hardly musically, due to the final short note
that would prompt to repeat the piece *ad infinitum*. This score introduces rests,
but only at the start of each figure and only following the bass note.

Using four fingers, the five notes can still be played with one hand on the
Louvre *aulos*, increasing the physical demands posed by the preceding items.
On the wind instrument, the rests would call for tonguing. If the second pipe
was supposed to play either a drone or an accompaniment in intervals, such
tonguing might likely have affected only the reed of the melodic pipe. In addi-
tion, the phrasing might exemplify some of the melodic shapes detailed in the
preceding text. It starts with a rising sequence across the entire fifth (which
is then iterated in a second phrase), that might end in an *ekkrousmos*, the

FIGURE 4   *Anon. Bell. § 101 = DAGM no. 37.*

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60   Aristid. Quint. 1.8, p. 13.4f. W.-I.
61   Hagel 2008a, 129-31.

repetition of a note with an intervening higher note. Perhaps just by chance, this figure would be identical with the first example the text provides for the *ekkrousmos* (FCF, *D e D*). We will come back to this piece later.

The other example within the same range introduces more rests and some larger intervallic jumps (§ 98, Figure 5). It is in 'eleven-time', and one of the items that can be reconstructed with the greatest confidence. The frequent rests, emphasising the preceding notes by a staccato effect, once more call for improved fluency.

The gamut of the remaining two items is a full octave, more than a hand might possibly play on a single pipe. Regarding the ranges, therefore, we seem to have two pieces for each of the primary consonances of a fourth, a fifth and an octave. However, in contrast to the other items, only one of the octaves also starts from the lowest note, while the other sits a third higher in the scale. The former one is melodically unpretentious, it merely ascends and descends from *proslambanomenos* to *mesē* and back, forming an example of both *agōgē* and *analysis*.

But this does not mean it would be easy to play. When performed on an *aulos*, at least one without an expensive metal mechanism, the melody must be distributed between the two pipes. This can be done in several ways: most simply, by using a common drone note that always switches to the pipe that does not have the melody; alternatively, by switching through a common note that is sounded on both pipes, or also by executing a more complex accompaniment whose rhythmical structure, for instance, sets it apart from the melody. At any rate, no more than five notes can be given to the lower pipe. As a consequence, the rests are also distributed between the pipes in a sense: both in the ascending and in the descending half, one rest must fall within the range of the lower pipe and the other within that of the higher pipe. This may form an essential part of the exercise: after having learnt to tongue the reed of one pipe in the pair selectively, the apprentice would now switch between tonguing first the lower, then the higher pipe, and finally the lower one again.

In practice, this is not easily achieved just by shifting the tongue from one side of the mouth to the other in order to touch only the reed of the pipe that has the melody silencing it (whenever there is a rest), or providing articulation

FIGURE 5   *Anon. Bell. § 98* = DAGM *no. 35.*

FIGURE 6   *Anon. Bell. § 99 = DAGM no. 36.*

(whenever there is none). The reeds being so closely together and the tongue much broader than them, there is always a substantial risk of interfering with the vibration of the other one as well. As experience has shown, it is therefore a good idea to get the reed that is meant to sound undisturbed out of the way of the tongue. This can only be done by adjusting the inclination of the pipes. The one that is tongued needs to be held straight or a bit upwards, so that its reed tip inside the mouth remains close to the tip of the resting tongue. In order to stop the flow of air the tongue thus only needs to be raised a little bit, in a movement that closely resembles that producing the consonants 't' and 'n' by which the text expressed the different types of articulation. The accompanying pipe, in contrast, is pulled downwards, so that its reed approaches the palate and keeps clear of the tongue. The resulting vertical angle between the pipes is not infrequently seen in iconography (though there it might be no more than a means of clearly displaying both pipes in side view). When switching the melody from one pipe to the other, their relative position would have to be inversed.

Of course, all this cannot prove that selective tonguing was in fact a skill that the apprentice on the *aulos* had to learn, as opposed to keeping both pipes silent wherever a rest was notated. Personally, I think the musical effect is much more convincing in the former way, when both the melody and its silences unfold against an unchanging background. The distribution of rests in the pieces may still be a valid argument: while they don't seem to make any specific didactic sense as such, they create various degrees of challenge if viewed as exercises in selective tonguing. In this context, § 101 may be of special interest if we assume that a beginner would first have played these etudes with an unchanging drone. If the bass note was used for such a drone, all of the rests of § 101 would involve stopping the same note on one pipe that continues on the other. This would, on the one hand, practise this kind of intonation in precisely the context in which it is most crucial because the perception of the phrasing is not supported by a difference in pitch. In addition, it does so for the pitch that is most difficult to play and most likely to squeak inadvertently when the tongue is released again. On the other hand, if both pipes play the same note at these points, it is at least guaranteed that the optimal pressure is the same for both. In this respect, the rests of § 98 are more challenging, and even more so those of § 99, where a constant drone establishes large pitch differences that

jeopardise the stability of the oscillatory regimes in the critical moments when the tongue touches and releases the reed.

Independently of the question of selective tonguing, how safe is the assumption of a simple instrument similar to the Louvre *aulos*, as opposed to a pipe with a mechanism of rotating sleeves, where each note could be opened and closed individually?[62] Would § 99 not call for precisely such a design, training the player in opening a long row of holes subsequently and closing them again? Probably not, because, apart from introducing precious instruments into a beginners' course, such an assumption appears to be incompatible with the last item, § 104 (Figure 7).

Here the octave extends from *parypatē hypatōn* ∟ (*C*) up to *tritē diezeugmenōn* ⊔ (*c*), which bound the Lydian octave species, as has been remarked.[63] Already the first ascent in jumps of a fourth and two thirds appears to exclude the possibility of performing the melody on a single pipe, and this becomes undeniable towards the end, with the octave jump: even on the most favourable assumptions about what may have gone on before, here the player would need to close the hole for ∪ (*f*) and then move upwards to open that for ⊔ (*c*) within only a single time unit.[64] If the ascription to the *aulos* is conceded, we may therefore distinguish between melodies 'for one hand' and 'for two hands'.

The association with the wind instrument may be corroborated by the lowest note of the piece, which once more links it to the design of the '*proslambanomenos aulos*'. In its most typical playing configuration, with all holes open and the hands in highest position, taking advantage of the thumb holes, ∟ (*C*) is precisely the lowest playable note.[65] Although requiring the use of all fingers, and particularly at least one thumb, more likely both, it poses the least demands on their spans and is thus arguably the easiest of the exercises, all

FIGURE 7   *Anon. Bell. § 104 = DAGM no. 32.*

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62   For pipe mechanisms cf. Howard 1893; Hagel 2012; Sutkowska 2012; Sutkowska 2015.

63   E.g., Najock 1972, 155.

64   Note that overblowing to the octave is not feasible on the cylindrical instrument.

65   Cf. Hagel 2016, 149 fig. 2. One might wonder whether the highest note of this item points to another type of *aulos*, as it is identical with the highest note of a typical Hellenistic modulating instrument (Hagel 2009b; Hagel 2009a, 343-51)—in this case it would indicate a more or less absolute Lydian pitch and not a relative degree. But it is difficult to see how such an instrument would have played the lowest notes of the piece, as we would rather expect its second pipe to have been higher, not lower.

the more since it features no rests at all. This may add substance to Pöhlmann's and West's decision to print this piece first, doing justice to the heading of § 97. Doubts remain however about its rhythmical interpretation. On the last note the three-times sign is missing that would be required for supplementing the rhythm, and nobody seems to have addressed the presence of an awkward upwards stroke after the seventh note.[66] The octave leap also seems little motivated, especially so briefly before the end—if this was originally the end. It appears all the more remarkable after a text that addressed the question of how to execute a rising octave leap. However, if the second note really bore a length mark, it can hardly exemplify an octave *prokrousis*, because this seems rather to be defined as consisting of half-time notes (§ 6).[67]

The notation of *prokrousis* and *ekkrousis* is unclear anyway. In the text these are represented by a sequence of two notes without any additional sign. This cannot be true, however, if the definition of § 6 is taken seriously. If the two notes are to be understood to share a single time value, this must have been expressed in the notation—but in instrumental scores, this is indicated by the hyphen, a slur below the line connecting the notes in question, which the editions attribute exclusively to *prolēpsis* and *eklēpsis*.[68] At any rate, it may appear surprising that the exercises do not even exhibit any examples of a hyphen, let

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66 Normally one would read this as an octave stroke, ⊓′ (*g′*), replacing the note in the falling series with its counterpart one octave higher. On a Louvre-type *aulos*, this is just possible, since the note would be played by overblowing the lowest note in the piece, ⌞ (*C*).

67 Differently Najock (1972, 170f. n. 1), whose argument I am not the first to find hard to follow (cf. Winnington-Ingram 1975, 417), including its underlying identification of the text's 'single' = 'smaller' time value with the *prōtos khronos* of Aristoxenian rhythmics. I take the former as referring to a note with a duration analogous to that of a short syllable in song: one *khronos* is simply half of what is marked as *dikhronos*, a third of *trikhronos*, etc. (§ 1 || § 83; cf. codex *Monacensis* gr. 48 fol. 478r, Vincent 1847: 234: τὸ μὲν οὖν ἐλάχιστον φωνῆς ἐμμελοῦς μέρος φθόγγον εἶναι, οὗ τὸν μὲν τῆς βραχείας συλλαβῆς χρόνου ἑνὸς γίγεσθαι, τὸν δὲ τῆς μακρᾶς δυοῖν μὲν τὰ πολλά, γίγνεσθαι δ᾽ ἐν ταῖς μελῳδίαις καὶ πλειόνων "The smallest part of melodic voicing would be the note, of which that of a short syllable would be of a single time, that of a long mostly of two, but in the melodies sometimes also of more"). The melodic division of short syllables is well attested for Roman-Imperial music. Aristoxenus' *prōtos khronos*, in contrast, is the shortest duration required in theory for describing a particular performance. In § 88, finally, ⟨πρό⟩κρουσις δέ ἐστιν ἐν χρόνοις δύο does not even make much sense as a sentence; it would most straightforwardly be emended to ⟨πρό-⟩ κρουσις δέ ἐστιν ἐν χρόν⟨ῳ ἑνὶ μέλη⟩ δύο.

68 Pöhlmann/West 2001 nos. 51 and 52; cf. below. In vocal notation, where short time values are defined by the short syllables of the text, no notation is required; often, the respective note group is only separated from the preceding by a dicolon (:), and this approach seems to be generalised in the instrumental *P. Mich.* inv. 1205 (Pöhlmann/West 2001 no. 61).

alone of a *kompismos*, *melismos* or *teretismos*. Have the respective marks been lost in the transmission, as have many of them in the examples in the text, and as have many of the *stigmai*?

At least in one case this appears very plausible. Above we have mentioned the problematic 'eight-time' (§ 101), which has called for interventions, either in the heading or in the score or in both. In the manuscript it appears in the following way:

⊢ Ȧ Γ L̇ F C Ḟ C̄
⊢ Ȧ Γ L̇ F C F L̄
⊢ Ȧ L Ṙ ⊢ L Ṙ L̄
C F F F F Ṙ F L ⊦̄

The first three lines have eight signs, the last of which is furnished with an unmistakable length mark, giving a total of nine times, not eight. The last line, in turn, features nine signs, once more with a concluding length mark, adding up to ten times. But it also contains a suspicious series of four similar notes, which is without parallel in the other pieces. Consequently editors have deleted one of these, in order to align the duration of the last line with those of the others, still leaving three similar notes in sequence.

Within the few ancient instrumental pieces we possess, the threefold repetition of a note is rare, but not unparalleled. It appears twice in *P. Berol.* 6870, dated to the second or third century CE (Figure 8). Both cases however involve a shortening of the first two instances (while the third occupies a regular note value). The group is notated as ＜ꓶ＜:＜. The first intermediate sign reminds of the shapes found for *kompismos* and *melismos* in the medieval manuscripts;[69] the second is the separation mark ('dicolon') that appears never to be discussed in our texts at all.

Now some of the transmitted shapes for either *kompismos* or *melismos* resemble the note sign F closely enough to be mistaken for it, especially when appearing in close context. The four F, therefore, might well represent an original FꓶFF, F+FF or FꓫFF

This hypothesis finds corroboration in another instrumental piece on the Berlin papyrus (Figure 9). In its second line it also contains the same kind of staccato-kind repetition, although here it leads to a note one step higher. The rhythm is a complex sequence of three-beat and two-beat units, forming larger groups whose extent cannot be determined with certainty. At any rate, the three-beat units, consisting of a *thesis* of one beat and an *arsis* of two beats,

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69   Cf. Najock 1972, 166 (*kompismos*); Pöhlmann/West 2001, 171 (either).

FIGURE 8   P. Berol. *6870.13-15* = DAGM *no. 51.*

appear always to come in pairs, which in turn seem always to be separated by a single two-beat unit. The repeated note occupies part of an *arsis*, generally accepted to represent the 'weak' part of the foot; the same is true of the instances in the other piece on the papyrus. More precisely it fills the first part of the *arsis* of the first three-beat unit in a pair. In other instances, the same position is realised either by prolongation of the preceding note (l. 1 bar 3) or by a rest (l. 1 bar 1; l .3 bar 1). A rest may appear at the same point also in a second three-beat unit (l. 3 bar 2). All in all, the rhythmical resolution of the note, whether it is a *kompismos* or a *melismos*, responds with rests, so that we may attribute a specifically weak rhythmical character to such a figure, which corresponds well with the mainstream interpretation of the nature of the *arsis*.

The proposed conjecture for the last line of § 101 establishes precisely the same kind of response, the resolved note occupying the second beat, which in lines 1-3

FIGURE 9   P. Berol. *6870.20-22* = DAGM *no. 52.*

is invariably realised by a rest. Since this is the only rest in eight positions, such a coincidence significantly increases the plausibility of the present hypothesis.

The time value of the transmitted sequence of FFFF is thus reduced from four (1+1+1+1) to two (½+½+1), and consequently the last line of § 101 would fill just the announced eight beats. Another welcome effect is that the extant *stigmē* of the last line nicely aligns itself with *stigmai* in the preceding lines:

$$
\begin{array}{cccccccc}
\vdash & \dot{\Lambda} & \Gamma & \dot{L} & F & C & \dot{F} & \bar{C} \\
\vdash & \dot{\Lambda} & \Gamma & \dot{L} & F & C & F & \bar{L} \\
\vdash & \dot{\Lambda} & L & \dot{\Gamma} & \vdash & L & \dot{\Gamma} & \bar{L} \\
C & F\!X\!F & F & \dot{\Gamma} & & F & L & \bar{\vDash}
\end{array}
$$

Moreover, the same note Γ (*B*) is now found in this position in lines 3 and 4, just as line 1 and 2 both had L (*C*) there, which may add to the melodic symmetry.

In the light of that alignment, the rhythmical mismatch between the first three lines and the last must be sought in the second half of the lines. Since a change from an original 'nine' to the transmitted 'eight' in the heading is palaeographically most unlikely, a change in the first three lines would appear preferable. Interestingly, although the last *stigmē* is lost in lines 2 and 4, lines 1 and 3 both have it preserved over the last but one note, following two without a dot. A sequence of two *stigmai* is nowhere found, although one would expect a three-beat unit to be notated in this way, at least on the basis of the other two items with similar units, § 98 and § 99. On the other hand, it seems to have been common practice to write only a single dot over two notes in a notated group. Consequently, it might be the best solution to take the last two notes before the final long one in lines 1-3 together within a single time unit. There is anyway no other possibility to establish an eight-beat rhythm for those lines, since the sequence of *theseis* and *arseis* is well established up until the fifth position.

How would the proposed rhythmical grouping have been marked originally? The only applicable sign that the text discusses, albeit in not unproblematic context, is the hyphen. I therefore suggest the following reading as the most likely restoration of § 101; a transcription is provided in Figure 10:

$$
\begin{array}{l}
\vdash \dot{\Lambda} \Gamma \dot{L} F \underline{C\dot{F}} \bar{C} \\
\vdash \dot{\Lambda} \Gamma \dot{L} F \underline{C\dot{F}} \bar{L} \\
\vdash \dot{\Lambda} L \dot{\Gamma} \vdash \underline{L\dot{\Gamma}} \bar{L} \\
C \dot{F}X F F \dot{\Gamma} \ F\dot{L}\bar{\vDash}
\end{array}
$$

This reconstruction, I think, is musically much more plausible than those that have been proposed so far: not only does it get rid of a weird ending on a short

after three bars with nice long finals, it also restores a rhythmical symmetry that creates a convincing whole comparable to that of § 98. In addition, it rescues the heading, and all this without any textual intervention apart from the re-interpretation of a single note sign (X for F) and the addition of three hyphens (and the two dots that are missing on any account).[70]

### 3.9   *Rhythmical Notation and its Transmission in the Manuscripts*

But is the omission of no less than three hyphen*s* credible? After all, we are adding a sign that, although explained in the preceding text, is not actually found in any of the examples. This brings us back to the question of notating *prokrousis* and *ekkrousis* as well as *ekkrousmos* and the respective variants in the manuscripts. The editors have basically relied on § 2, which lists the names of the melodic figures together with notated examples, and on the exclusive mention of the hyphen for *prolēpsis* and *eklēpsis*, bolstered by a statistical evaluation of the note examples that follow the subsequent definitions in the text of §§ 4-10 || 86-93. This, however, entails not only the more natural assumption of a frequent loss of hyphens, but also of quite a few random additions of hyphens, at least in BA1. Let us start with the simpler case of BA5, for which the Venetus Marcianus is the *codex unicus*. Here hyphens are written in the first five examples of one-step *prolēpsis* (with solmisation, without parallel in BA1), but omitted in the last two, written in all three examples involving larger intervals, written in the first two examples for *eklēpsis* but omitted in the third. No further example is found, but from the preserved ones one may glean a scribal tendency of becoming weary of copying hyphens.

In BA1, the initial list has hyphens for *prolēpsis* and *eklēpsis* throughout, but nowhere else. So far the evidence is coherent. In the text, however, we find one preserved hyphen for *prolēpsis* against three lost ones,[71] three preserved and one lost for *eklēpsis*—and those that are preserved are not so in all codices.

FIGURE 10   *Suggested reconstruction of Anon. Bell. § 101 =* DAGM *no. 37.*

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70   One might also consider restoring an *ekkrousmos* in the first two lines, extending the hyphen to the preceding note, since FCF, as discussed above, reflects the first respective example in the text. The musical difference is minimal:
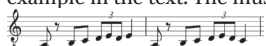

71   Frustratingly, precisely the instance where § 6 has the hyphen (FC) is omitted wholesale in 88.

But a hyphen is also attested once for *prokrousis* (against three missing), and for both examples of *ekkrousmos*.[72] For the latter, even BA5 retains vestiges of hyphens, which may have escaped neglect because they had been miscopied as punctuation marks early enough. On balance, the editors' decisions are perfectly justifiable: restoring the tidiness of § 2 throughout calls for some additions, which are in any case required, but only a few deletions, while printing hyphens only in combinations for which they are explicitly mentioned. Still, the loss of even more hyphens would be much easier explained than why somebody would have purposely added hyphens at some places.

Apart from the question of how instrumental *prokrousis* and *ekkrousis* would be notated at all without either a hyphen or a double point ('dicolon'), a more general consideration concerns the entire section. The 'melodic figures' are introduced as τὰ τοῦ μέλους ὀνόματά τε καὶ σημεῖα καὶ σχήματα, "names, signs and shapes of melody" (§ 2 ‖ § 84), therefore announcing their notation by means of special *sēmeia*. Indeed the entire context is focused on notation, starting from an account of rhythm merely on the basis of length marks and arsis dots and ending with the *diastolē*, a separator sign of dubious function. Unlike the preceding account of ascending and descending movement, which could be exemplified by simple successions of notes, all the terms here appear to denote some specific flavour of movement that would come with a way of indicating it. From such a perspective, the purportedly non-notated *prokrousis*, *ekkrousis* and *ekkrousmos* appear awkward, and more so since they do not appear at the outset, as one would expect for non-marked standard ways of melodisation, but only after a couple of marked items.

Indeed the practice of the musical documents does not reflect the text of the editions. On the Berlin papyrus, note pairs implementing both a single and a double time are written with hyphen—the distinction is drawn by means of a length mark over the latter (e.g., l. 15 ⊏< as opposed to ↰ἰ). In a vocal score, the hyphen may suffice; cf. e.g., *P. Oxy.* 3705,[73] where two of four exempli-gratia melodies for the same verse proceed by two notes per syllable, notated by hyphens alone regardless of the syllable quantity. However, where the syllables do not reveal the rhythmical contrast, even a vocal score would inevitably resort to the notation of instrumental practice. This is the case with the paean

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72   Apart from the hyphens tying the three notes together, these also involve additional ones linking the examples; the latter have apparently evolved out of a *hypodiastolē* introduced as a separator (,→ ͺ), which appears as a vertical line in codex *Florentinus Riccardianus* gr. 41. Cf. also the surplus Ϲ in § 91 between the two examples?

73   Pöhlmann/West 2001 no. 56; cf. no. 47.8 Ζ̣Ι̣ Ι̣Ζ̣ Ι̣Ζ̣ on a metrical sequence of short—long—short.

on the Berlin papyrus,[74] composed entirely of metrically long syllables, part of which are protracted to twice the length of the others. Both the logical requirements and the observed practice of ancient notation would therefore seem to call for hyphens marking especially *prokrousis* and *ekkrousis*.

When assessing the reliability of the manuscript tradition in this respect, another observation is important. While hyphens abound in the musical papyri from the Roman period, the substantial corpus of melodies preserved by scribal tradition does not feature a single one. Apart from the instrumental exercises discussed here, this concerns the 'Mesomedes hymns'.[75] Admittedly these exhibit a simpler style than most of the professional repertoire on papyrus, but even they contain a few melisms that, judging from the rest of the evidence, we would expect to be marked in some way: by a length mark, a hyphen, a dicolon or some combination of these. The lack of any such notation is especially striking in what appear to be instances of *ekkrousmos*, transitory excursions to the next higher note on a single syllable,[76] and also where rest signs clarify the rhythmical structuring of note groups.[77] But the Mesomedes pieces had not originally lacked all rhythmical marking, as a very few traces of length marks show. Since these evidently do not serve any particular purpose, we must assume that the scores have in fact lost an originally much richer notation. Only the letter-like note signs, however, were clear enough to survive repeated copying by scribes not acquainted with the finesses of ancient musical notation.

The hyphen, in spite of being much more conspicuous than a tiny *stigmē*, may have been especially ill-fated. Within Greek texts, it had been used for clarifying cases where sequences of letters that might have formed a new word in fact belonged with the following.[78] Having been an indispensable help for reading texts written in *scriptura continua*, this kind of hyphen became redundant in the Byzantine period, when minuscule texts regularly separated the words by spacing. The time-hallowed practice of placing hyphens was still continued by many scribes, but there could be no mistake that they were now optional. Thus it may be no wonder if they were omitted in our musical examples, the copying of whose note signs demanded full concentration anyway.

But even admitting that the texts have lost almost all hyphens that accompanied *prokrousis* and *ekkrousis*, how to account for the preceding list that has none even for the *ekkrousmos*, where the hyphen is well-attested in the

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74   Pöhlmann/West 2001 no. 51.

75   Pöhlmann/West 2001 nos. 24-28.

76   No. 27.23 and 25: PMP.

77   No. 27.7; 8; 9; 13; 21; no. 28.3; 10; 13.

78   Cf. Murphy 1995, 296-9.

subsequent text? First of all, the design of the list itself is suspicious. In B5, we find a similar enumeration of the terms to be dealt with, but without notational examples. This appears to be more natural: why would the examples be repeated, and what sense would it make to detail them before the meaning of the signs has been explained? On the other hand, one could see why somebody would have wanted to transfer the notations to the list, in order to obtain an overview. Unfortunately, however, the examples in the list are not simply extracted from the following text, at least not in the form in which the latter has come down to us. First of all, there are five examples for each *kompismos* and *melismos* in the list, but only two in the text, and as comparison with BA5 shows, there seem to have been only two even at that early stage when the two traditions split up. Secondly, copying from the text would almost certainly have resulted in an *ekkrousmos* with hyphen. If the list were a secondary creation, one would therefore need to assume that its distribution of hyphens was a reconstruction analogous to that of the modern editions, based on the mention of the sign in the text more than the notated examples, and that its creator decided, for some reason, to augment the examples for *kompismos* and *melismos* up to the upper boundary of the first four series of examples, while leaving those for *ekkrousmos* and *teretismos* as they were in the text. This seems a rather desperate attempt at explaining the contradictory evidence; a no less desperate alternative would be to assume that the list was created from a different version of the text, closer to the extant state of BA5.[79]

Whatever the correct reconstruction of the textual history, it is clear that many original hyphens have fallen victim to scribal negligence, and that the absence of hyphens for the *ekkrousmos* in the list is contradicted by its presence in the examples in the text, while a non-notated *prokrousis* and *ekkrousis* is in practice incompatible with their definition in BA1. Not having had a chance to consult the manuscripts within the two months I was granted to write this contribution, I must therefore leave it to the reader to decide which arguments may have more weight, and whether the proposed new eight-time reading of the 'eight-time' exercise might have some plausibility.

3.10   *The Original Order of the 'Exercises'*

A general observation may be in place, which likely applies to any restoration of this item in eight-time. Differently from what I had assumed previously,[80]

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79   At least the two versions are linked by a tantalising coincidence: a similar dittography of ⌐F is found in § 89 within the examples for *ekkrousis* and in § 2 within those for *eklēpsis* (and weirdly enough, the note pair is missing from those for *eklēpsis* in § 87).

80   Hagel 2008a, 128.

the classification of the rhythm as repeating after eight times, as opposed to, e.g., four or sixteen, would here not be governed by merely the smallest abstract repeating rhythm: the internal division of 8=2+2+2+2 would admit an abstract analysis into four-time units as well. Instead, recurrent features of the actualised rhythm are obviously taken into account. First of all, this would concern the long note at the end, which represents a kind of catalexis as often defines the end of a unit in Greek versification. Notably, the resulting structure of six equal durations realised as three pairs concluded by an element of double duration is still found in modern Greek traditional music ($\frac{4}{4}$ ♫ ♫ ♫ ♩). In addition, the structure of § 101 is also characterised by an especially weak second element, expressed either as a rest or a resolution.

With a *kompismos* or *melismos*, the piece might in fact be considered a more advanced exercise than § 98 and perhaps even § 99. While the latter include more rests, and § 99 the additional challenge of switching tonguing between the pipes, the tonguing required for § 101 goes beyond the simple onsets that ancient solmisation expressed by 't-' and which would have sufficed for the other two items. So the order of the three pieces which make up the second column in the manuscript might possibly reflect an ancient didactic purpose after all. Thus it might only be necessary to posit a displacement of § 104, if this was the first 'six-time' exercise, designed for being played by distributing the melody between the pipes, but doing so in the most comfortable fingering position and without any rests. The original order would then have been precisely as restored by Pöhlmann and West: § 104—§ 97—§ 100—§ 98—§ 99—§ 101.

Conclusion

When searching for remnants of '*Musics*' such as Gaudentius referred to as basic and readily available introductions containing notation tables, the remnants of two works appear to provide the closest matches. On the one hand, we have those few excerpts that claim to be taken from '*The Music*'. These are focused on lyre playing, as appears most appropriate in the context of Roman-period elite education. On the other hand, §§ 66-104 from Bellermann's *Anonymi* provide a coherent practical introduction for the beginner, focusing on all aspects of musical notation, while presenting notions we also know from treatises on harmonics only where these are of immediate practical relevance. Considerable use is made of a solmisation system that combined the memorisation of pitch relations with a vocal expression of instrumental phrasing. The instrument in question was almost certainly the *aulos*, which may appear surprising on a first glance, considering its traditional literary depreciation in

a world heavily influenced by Plato's works. But just as the art of the *aulos* had been held in the highest esteem in classical Thebes while being increasingly frowned upon in Athens, we may surmise that *aulos* playing continued to be a respectable way of musical education in many communities throughout antiquity. At any rate, student competitions in this art are attested in Hellenistic inscriptions from Teos. If the text as we have it reflects an ancient curriculum, the students would have become familiar with solmisation by repetitive exercises spanning the double octave of the Perfect System (§§ 80f.), exceeding the gamut of their beginners' instrument. Subsequently they would have been trained in various techniques, including the distribution of a melody between the pipes, managing the more arduous finger spans and positions required for playing in the bass region, and proper tonguing, including rests and staccato effects, as well as the expression of various rhythmical forms. From the pieces themselves, it seems that a typical instrument would have resembled the Louvre *aulos* in structure, though not necessarily in pitch. The teacher would likely have communicated the melodies and their phrasing by means of solmisation, and the students may have memorised them in this way, before applying them to the instruments.[81]

Part of this schoolbook came down to us in two different recensions, which demonstrate that it had been regarded as an open text. How long may it have been around? The last ancestor of the two extant recensions, at least, can hardly have been much earlier than the Roman Imperial period. So much appears certain from the presence of the hyphen as a musical sign, which is so well known from the notation of that era, but absent from earlier musical documents.[82] Interestingly, this makes our text more modern than most of the handbooks on harmonic, which largely reproduce material from the fourth century BCE, the times of Aristoxenus and the author of the *Division of the Canon*. Only Aristides Quintilianus, in his effort of writing the first truly comprehensive book on music, was not abashed to include such introductory material as well, even

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81   We do not have enough information to reconstruct the consonants that might have been used in every detail, but we may make educated guesses. Assuming that the start of a rhythmical foot was generally indicated by a consonant, § 101 might have sounded from the mouth of an ancient teacher as follows: τε – τα-η τω-αω τᾰ | τε – τα-η τω-αω τῆ | τε – τη-α τε-ηα τῆ | τα-ωννωτωα τω-η τε̄. For 'vocables' used in pipe teaching cf. D'Angour 2016, 274f., relying on communication by Barnaby Brown (however, the 'Celtic triplepipe tradition' must be a misunderstanding—in contrast to Sardinian *launeddas*, Western European triplepipes died out in the Middle Ages and are known only from iconography).

82   The slur in *PHib.* 231 (Pöhlmann/West 2001 no. 7.2.1) cannot be a hyphen in the later sense because it (a) links similar notes and (b) appears in contrast to two slurs above the note signs on the same papyrus.

though he did not start his first book with a full basic course.[83] Likely such a course was anyway unconceivable in book form; a true '*Music*' would only have accompanied instruction by a real teacher making real sounds on real instruments. Naturally, such schoolbooks, though they must have been omnipresent as long as the ancient educational system lasted, ceased to be copied as soon as it had broken down. After all, we are lucky to have some remnants of them within the collection of 'Bellermann's *Anonymi*' as well as in the lyre-focused excerpts. And even these may not contain the most practical parts, which must have been of least interest to Byzantine scholars.

Bibliography

Barker, A. (1989). *Greek Musical Writings* 2. *Harmonic and Acoustic Theory*. Cambridge: Cambridge University Press.

Barker, A. (1994). Greek Musicologists in the Roman Empire. *Apeiron* 27.4, pp. 53-74.

Bélis, A. (1984). *Auloi* grecs du Louvre. *BCH* 108.1, pp. 111-22.

Bellermann, F. (1841). *Anonymi scriptio de musica. Bacchii senioris Introductio artis musicae*. Berlin: A. Förstner.

D'Angour, A. (2016). Vocables and Microtones in Ancient Greek Music. In: *Greek and Roman Musical Studies* 4.2, pp. 273-85.

Groningen, B.A. van (1940). *Short Manual of Greek Palaeography*. Leiden: Sijthoff.

Hagel, S. (2000). *Modulation in altgriechischer Musik: Antike Melodien im Licht antiker Musiktheorie*. Frankfurt: Peter Lang.

Hagel, S. (2004). Calculating *Auloi*—The Louvre *Aulos* Scale. In: E. Hickmann and R. Eichmann, eds, *Music-Archaeological Sources: Excavated Finds, Oral Transmission, Written Evidence*, Studien zur Musikarchäologie (Orient-Archäologie) 4 (15), Rahden: Leidorf, pp. 373-90.

Hagel, S. (2005). Twenty-four in *Auloi*: Aristotle, *Met.* 1093b, the Harmony of the Spheres, and the Formation of the Perfect System. In: S. Hagel and C. Harrauer, eds, *Ancient Greek Music in Performance*, Vienna: Österreichischen Akademie der Wissenschaften, pp. 51-91.

Hagel, S. (2008a). Ancient Greek Rhythm: The Bellermann Exercises. *QUCC* 117 (n.s. 88.1), pp. 125-38.

Hagel, S. (2008b). Re-evaluating the Pompeii *Auloi*. *JHS* 128, pp. 52-71.

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83   It may be significant here that Aristides, in spite of being keen to associate his tenets with famous names or at least unspecified antiquity, does not invoke ancient authorities, real or constructed, when introducing the vowel-based system: certainly he had not found anything about it in early sources.

Hagel, S. (2009a). *Ancient Greek Music: A New Technical History*. Cambridge: Cambridge University Press.

Hagel, S. (2009b). Reconstructing the Hellenistic Professional *Aulos*. In: M.C. Martinelli, ed., *La Musa dimenticata: aspetti dell'esperienza musicale greca in età ellenistica*, Pisa: Edizioni della Normale, pp. 227-46.

Hagel, S. (2010). Understanding the *Aulos* Berlin Egyptian Museum 12461/12462. In: E. Hickmann and R. Eichmann, eds, *Musical Perceptions, Past and Present. On Ethnographic Analogy in Music Archaeology*, Studien zur Musikarchäologie (Orient-Archäologie) 7 (25), Rahden: Leidorf, pp. 67-87.

Hagel, S. (2012). The Pompeii *Auloi*: Improved Data and a Hitherto Unknown Mechanism. In: R. Eichmann and F. Jianjun, eds, *Sound from the Past: The Interpretation of Musical Artifacts in Archaeological Context*, Studien zur Musikarchäologie (Orient-Archäologie) 8 (27), Rahden: Leidorf, pp. 103-14.

Hagel, S. (2014). Better Understanding the Louvre *Aulos*. In: R. Eichmann, F. Jianjun and L.-Ch. Koch, eds, *Papers from the 8th Symposium of the International Study Group on Music Archaeology in Suzhou and Beijing, China, 20-25 October 2012*, Studien zur Musikarchäologie (Orient-Archäologie) 9 (33), Rahden: Leidorf, pp. 131-42.

Hagel, S. (2016). 'Leading notes' in Ancient Near Eastern and Greek music and their Relation to Instrument Design. In: R. Eichmann, F. Jianjun and L.-Ch. Koch, eds, *Sound–Object–Culture–History*, Studien zur Musikarchäologie (Orient-Archäologie) 10 (37), Rahden: Leidorf, pp. 135-52.

Hagel, S. (2017). Language and Dance: A Non-Platonising View. In: L. Gianvittorio, ed., *Choreutika. Performing Dance in Archaic and Classical Greece*, Pisa/Roma: Fabrizio Serra, pp. 198-214.

Hagel, S. and Lynch, T. (2015). Musical Education in Greece and Rome. In: W.M. Bloomer, ed., *A Companion to Ancient Education*, Chichester: Wiley-Blackwell, pp. 401-12.

Hirschfeld, G. (1875). Inschrift von Teos. *Hermes* 9, pp. 501-3.

Howard, A.A. (1893). The Αὐλός or Tibia. *HSPh* 4, pp. 1-60.

Hughes, D.W. (2000). No Nonsense: The Logic and Power of Acoustic-Iconic Mnemonic Systems. *British Journal of Ethnomusicology* 9.2, pp. 93-120.

Jan, K. von (1895). *Musici scriptores Graeci. Aristoteles, Euclides, Nicomachus, Bacchius, Gaudentius, Alypius et melodiarum veterum quidquid exstat*. Lipsiae: Teubner.

Murphy, D.J. (1995). Hyphens in Greek manuscripts. *GRBS* 36, pp. 293-314.

Najock, D. (1972). *Drei anonyme griechische Traktate über die Musik*. Kassel: Bärenreiter.

Najock, D. (1975). *Anonyma de musica scripta Bellermanniana*. Leipzig: Teubner.

Pöhlmann, E. (1970). *Denkmäler altgriechischer Musik. Sammlung, Übertragung und Erläuterung aller Fragmente und Fälschungen*. Nürnberg: Hans Carl.

Pöhlmann, E. (1975). Rev. of D. Najock, *Drei anonyme griechische Traktate über die Musik* (Göttingen 1972). *Die Musikforschung* 28, pp. 482f.

Pöhlmann, E. (1994). Musiktheorie in spätantiken Sammelhandschriften. In: A. Bierl, P. v. Möllendorf and S. Vogt, eds, *Orchestra: Drama, Mythos, Bühne*, Stuttgart/Leipzig: Teubner, pp. 182-94.

Pöhlmann, E. (1995). Griechenland. A. Antike Musik. In: *MGG²* Sachteil, Bd. 3.

Pöhlmann, E. (2018). Ἀνωνύμου σύγγραμμα περὶ μουσικῆς (Anonymi Bellermann). An Agglomeration of Five Musical Handbooks. *GRMS* 6, pp. 115-27. DOI: 10.1163/22129758-12341315

Pöhlmann, E. and West, M.L. (2001). *Documents of Ancient Greek Music. The Extant Melodies and Fragments.* Oxford: Clarendon Press.

Psaroudakes, S. (2010). The Hellenistic Side Flute and the Koile-Athens Instrument. *Rudiae* 22, pp. 519-54.

Reinach, Th. (1896). Deux fragments de musique grecque. *REG* 9, pp. 186-215.

Reinach, Th. (1897). Fragments musicologiques inédits. *REG* 10, pp. 313-27.

Ruelle, Ch.É. (1908). La Solmisation chez les anciens Grecs. *Sammelbände der Internationalen Musikgesellschaft* 9, pp. 512-30.

Sutkowska, O. (2012). One of Nine *Tibiae* from a *Villa Rustica* in the Vesuvian Area Re-discovered. In: R. Eichmann and F. Jianjun, eds, *Sound from the Past: The Interpretation of Musical Artifacts in Archaeological Context*, Studien zur Musikarchäologie (Orient-Archäologie) 8 (27), Rahden: Leidorf, pp. 115-25.

Sutkowska, O. (2015). Archäologische *Auloi/Tibia* Funde mit Mechanismen. *Die Tonkunst* 9, pp. 412-22.

Terzēs, Ch. (2014). Koile *Plagiaulos* Fingering Chart. <https://www.facebook.com/photo.php?fbid=690006661090389> (accessed: 2017-10-01).

Vincent, A. (1847). *Notices et extraits des manuscrits de la bibliothèque du roi et autres bibliothèques* 16.2. *Notice sur divers manuscrits grecs relatifs à la musique.* Paris: Imprimerie royale.

West, M.L. (1992). *Ancient Greek Music*. Oxford: Oxford University Press.

Westphal, R. (1865). *Allgemeine griechische Metrik*. Leipzig: Teubner.

Winnington-Ingram, R.P. (1975). Rev. of D. Najok, *Drei anonyme griechische Traktate über die Musik* (Göttingen 1972). *Gnomon* 47, pp. 416-8.

Winnington-Ingram, R.P. (1955). Fragments of Unknown Greek Tragic Texts, with Musical Notation (P. Osl. inv. no 1413). II: The music. *SO* 31, pp. 29-87.

Zanoncelli, L. (1990). *La manualistica musicale greca.* (*Euclide*)*, Cleonide, Nicomaco, Excerpta Nicomachi, Bacchio il Vecchio, Gaudenzio, Alipio, Excerpta Neapolitana.* Milano: Guerini.

BRILL

The *Koinē Hormasia* Re-Interpreted

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Abstract

The *hormasia*-table is preserved in a manuscript from 1040 AD. The heart or kernel of the table (two columns, each with 16 Hypolydian notes) was probably established in antiquity in order to provide a mean-tone tuning and a basic system for playing two voices on the harp (or the organ): a given melody with the right hand and a more or less schematic accompaniment with the left. In Byzantine times, the system was probably used as a stringing plan for doubly registered psalteries, both of the rectangular and the harp-like type.

The *koinē hormasia*[1] ("common tuning/harmonizing") is preserved in the MS *Palatinus* 281, f. 173r., from 1040 AD (cf. Figure 1).[2]

The page is carefully written and practically free of errors, but the note symbols of the Hypolydian scale used are associated with the note names of the Lydian scale. According to Pöhlmann, the last editor of the *hormasia*,[3] this awkward association derives from the text of Gaudentius, where—possibly

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1   This article is a re-arranged and enlarged version of the last part of my paper *Begegnungen mit der Harfe in byzantinischer Zeit*, which I read at the *Historical Harp Symposium 2016* in Berlin. The original version will appear in the proceedings of the symposium, together with the other parts of the paper (Byzantine miniatures and texts referring to the harp).

2   Cf. Pöhlmann 1970, fig. 11. A short description of the manuscript is given by Jan (1895, LXXVI).

3   Cf. Pöhlmann 1970, 32-5, in particular 34f.

FIGURE 1   *Heidelberg, UB Palatinus 281, f. 173r. (1040) (cf. Pöhlmann 1970, fig. 11).*

in a mutilated manuscript[4]—the Lydian symbols and the Hypolydian names (which should occur between the Lydian names and the Hypolydian symbols) were missing. In fact, the words Λυδίου κατὰ τὸ διάτονον in the upper left margin are an addition of a slightly later hand and should not be understood as a subtitle. They must have been added by a reader who became aware of the fact that the note names were Lydian. The note symbols, however, are Hypolydian, fitting perfectly to the first words on the right margin, Ὑπολυδίου κατὰ τὸ διάτονον,

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4   Cf. Jan 1895, 352.

and these words were obviously written by the first hand[5], probably as a part of an original index of contents. So these words fit only to the symbols of the notes, but not to their names. It is not unlikely, therefore, that the note names were added to the symbols at some time between Gaudentius (perhaps 4th century AD) and 1040, the date of the codex.

Furthermore, the *hormasia* presents some minor deviations from the classical musical systems and notation, but they are consistent and free of contradictions. All this led Pöhlmann to the hypothesis that the *hormasia* is a learned construction (of Byzantine times presumably). This hypothesis must probably be acknowledged, if the *hormasia* is regarded as a whole. At least, the second part of the title, ἡ ἀπὸ τῆς μουσικῆς μεταβληθεῖσα, "taken over from the music" (where 'music' refers to a collection of musical texts), is almost certainly a Byzantine addition. Also the first part of the title may be Byzantine, since *hormasia*, for *harmosia*, seems to occur not earlier than in Aëtios (6th century). On the other hand, if we concentrate on the Hypolydian note symbols (leaving the names out of account), we see that these notes constitute a consistent and meaningful heart or kernel of the *hormasia* table and that this kernel may have been established in antiquity as well. The table consists of two columns, a left and a right one, each with 16 notes. In the following diagram, these notes are represented by modern letters in the simplest way, in particular without reference to absolute pitch,[6] and the columns are given as rows for simplicity:

right hand:	*g*	*a*	*b*	*c'*	*d'*	*e'*	*f'*	*g'*	*a'*	*b'*	*c"*	*d"*	*e"*	*f"*	*g"*	*a"*
left hand:[7]	*d*	*d'*	*a'*	*g'*	*g'*	*c'*	*c'*	*e'*	*f'*	*g*	*a*	*bb*	*b*	*d'*	*e'*	*f'*

Here the vertical pairs of notes constitute the following intervals:

intervals:	*4*	*-4*	*-7*	*-5*	*-4*	*3*	*4*	*3*	*3*	*10*	*10*	*10*	*11*	*10*	*10*	*10*

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5   In Λυδίου, on the left margin, the letter υ is rounded at the bottom and the ending ου is written out, while in Ὑπολυδίου, on the right margin, the corresponding υ is peaked at the bottom and the ending ου is abbreviated. Similarly, δια in διάτονον is abbreviated on the left margin, but written out on the right.

6   Cf. Jan 1895, 421 and Pöhlmann 1970, 34.

7   *b* flat is represented by *bb* in this article, *e* flat by *eb*.

It should be noted that neither the octave nor the unison occurs, that even the fifth occurs only once and that most intervals are thirds and fourths (including tenths and an eleventh). The column headings ἀριστερᾶς χειρός ("of the left hand") and δεξιᾶς χειρός ("of the right hand"), in the above representation given as row headings, have been interpreted by Jan as mere indications of the place in the table, and most scholars have adopted this interpretation. It must be remarked, however, that 'on the right', for example, was expressed in ancient Greek by ἐν δεξιᾷ or ἐπὶ δεξιά rather than by δεξιᾶς χειρός. We must face, therefore, the possibility that χειρός is meant here in the literal sense.

The system given above in two rows (for right and left hand), i.e. the kernel of the *hormasia* table, has been interpreted with some plausibility in two ways, (i) as a tuning procedure[8] and (ii) as a system for playing two voices.[9] In the second case, however, the *hormasia* should not be regarded as a piece of music, but as a general instruction that indicates which note has to be played in the accompaniment (left hand) for any given note of the melody (right hand). As an experiment, I have applied this scheme to the melodies of the song of Seikilos[10] and the hymns to Helios and Nemesis of Mesomedes[11] (after transposing them into Hypolydian). The musical result is good in these cases, and this procedure would imply that the use of the third and the tenth as consonances is documented long before the English canon *Sumer is icumen in* from 1240 (the Reading Rota), i.e. at least towards 1040 in Byzantium (the date of the codex) or even much earlier in the Greek world. In this interpretation, the column headings, ἀριστερᾶς χειρός and δεξιᾶς χειρός, have been taken in the literal sense, and the assignation of the melody to the right hand and of the second voice to the left corresponds well to playing techniques of the organ and of the harp in particular. The *hormasia* heading κατὰ κιθαρῳδίαν in a manuscript of the 15th century, the *Neapolitanus* III C 2, might be an indication that the system is meant for a plucked instrument. This manuscript is much later and much worse than the *Palatinus* 281,[12] but as an independent source it deserves

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8   Cf. Jan 1895, 422f.

9   Cf. Zarlino 1588, 283: "si vede anco la maniera, che tenevano gli Antichi nel descrivere i lor Concenti & Cantilene [...] Ne fanno etiandio fede, che gli Antichi cantavano & sonavano in consonanza alcune sorti d'Istrumenti antichissimi"; Vincent 1847, 255: "gamme de cithare, exécutée par la main droite tandis que la main gauche y fait un accompagnement".

10   Cf. Pöhlmann 1970, no. 18; West 1992, no. 15; Pöhlmann and West 2001, no. 23.

11   Cf. Pöhlmann 1970, no. 4 and no. 5; West 1992, no. 18 and no. 19; Pöhlmann and West 2001, no. 27 and no. 28.

12   Cf. Jan 1895, LI-LIV (description) and 420 (text). The *Neapolitanus* III C 2 even completely lacks the note symbols of the *hormasia*.

a certain attention. Yet the supposed 'heading' may well be a late addition, just as Λυδίου κατὰ τὸ διάτονον in the *Palatinus*. At any rate, my two-voice-version of the song of Seikilos has been played on the harp by Judy Kadar on two occasions, the *Lyre Symposium* organized by Nancy Thym in 2010 and the *Historical Harp Symposium 2016* in Berlin. Furthermore, it must be mentioned here that not all Hypolydian melodies fit to this scheme. When applied to the fragment of a Christian hymn,[13] for example, the results are somewhat awkward, because of the frequent transitions between *b* and *b* flat in the accompaniment. This problem can be avoided, however, by a simple modification of the system such as the substitution of *b* for *b* flat.

The interpretation of the table as a tuning procedure, suggested by Jan and adopted by Hagel,[14] looks rather plausible at first sight. Indeed the notes assigned to the left hand can be tuned in the given order by comparison with a previously tuned note (comparison by octaves, fifths and fourths). This is possible, because in the beginning the notes *d'*, *a'*, *g'* and *c'* establish a frame that leads immediately to *e'* and *f'*, and from there soon to *b* flat and *b*. On the other hand, there are many sequences of notes that can be tuned in such a way, i.e. by comparison with a previously tuned note from the earlier part of the sequence, and therefore we must look for the sense of this special sequence. Furthermore, a tuning plan should specify not only the notes to be tuned, but also the notes of comparison, and most probably it would contain each note only once, whereas in our case *g'*, *c'*, *d'*, *e'* and *f'* occur twice. Finally, the interpretation of the table as a tuning procedure does not take into account that the two columns of notes are linked by a very special relation. Almost every pair of notes in the rows of the original table (i.e. in the columns of the above diagram) forms a consonance (including thirds and tenths), as shown in the list of intervals below the diagram. Because of these shortcomings, I strongly prefer the interpretation as a system for adding a second voice to a given melody, although hitherto not all problems of the table have been solved.[15]

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13   Cf. Pöhlmann 1970, no. 34; West 1992, no. 51; Pöhlmann and West 2001, no. 59.

14   Cf. Jan 1895, 422f.; Hagel 2009, 126.

15   This refers mainly to the symbols M\A and K\O, which accompany each note and which, according to Hagel (2009, 131), may be abbreviations for μαγάς ("bridge") and κόλλαβος ("tuning peg"). This explanation, however, needs an explanation of its own. Nevertheless it is worth mentioning that in the left hand column of the original table K\O is associated with the tetrachord *b-c'-d'-e'* and M\A with a tetrachord *f-g-a-bb* which can be deduced from *g-a-bb* and *f'-g'-a'*.

A third interpretation of the *hormasia* results from a comparison of the table with the *plinthion* and the *nuzha*, which may be regarded as an Arabian version of the *plinthion*. Both of these instruments could have 32 strings, i.e. just the number of notes of the *hormasia*.

The *plinthion*, "small brick", "small rectangular box", is attested as a musical instrument by several Byzantine sources:[16] an early alchemical treatise[17] (dated between the 6th and 9th centuries[18]), Konstantinos Rhodios[19] (870/80-931), Konstantinos VII Porphyrogenetos[20] (905-959) and the Hagiopolites[21] (12th century). The alchemical treatise, dealing with analogies between alchemy and music,[22] lists it among the stringed instruments[23] (γένος κιθαρικόν) and associates it with the number 32, obviously 32 strings: ἔστι γὰρ πλινθίον τὸ διὰ τῶν λβ, λύρα ἡ διὰ τῶν ἐννέα, "plinthion is the one through (i.e. with a range of) 32 (strings), lyre that through 9" (Berthelot and Ruelle 1888, 2, 438,3f.). According to the form of a flat box,[24] it was most probably the rectangular psaltery. More details have not been preserved, but this gap is filled by the *nuzha*.

The *nuzha*, "delight",[25] was an Arabian psaltery. A special rectangular type, depicted in a manuscript of 1333/4 and invented by Ṣafī al-Dīn 'Abd al-Mu'min in the 13th century (cf. Figure 2),[26] also had 32 strings.

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16   For the *plinthion* cf. also Maliaras 2007, 78f.

17   Berthelot and Ruelle 1888, 2, 433-41.

18   According to Berthelot and Ruelle (1887, 1, 196 and 202), late 6th century, according to Wellesz (1949, 61ff.) rather 9th century; further dates are given by Maliaras (2007, 33); the oldest copy is in the MS *Marcianus* Gr. 299 (11th century).

19   Cf. Matranga 1850, 625: βαρβητο-ναβλο-πλινθο-κυμβαλο-κτύπε (mocking poem on Leon Choirosphaktos, v. 21, without hyphenation).

20   Cf. Vogt 1939, 18of.: πληθίον, together with χειροκύμβαλα (*De cerimoniis aulae byzantinae* 2.9of.); in this place perhaps a type of 'Saitentrommel'.

21   Cf. Raasted 1983, 86: πλυνθίον (Hagiopolites 97.4).

22   Cf. Berthelot and Ruelle 1888, 2, 434,4-6 and 437,6-9: on the side of music, four generic *stochoi* (*Α Β Γ Δ*)—which have been interpreted as the four main scales in the 17th century—are subdivided each into six species (*kentroi, isoi, plagioi, katharoi, aēchoi, paraēchoi*). Nothing of this corresponds to ancient musical theory and very little to Byzantine. The practical part, however, dealing with musical instruments, makes much more sense.

23   Cf. Berthelot and Ruelle 1888, 2, 437,18.

24   In ancient mathematics, the *plinthion* appears as the product 2x4x4, i.e. as a case with a quadratic base 4x4 and height 2, resulting in a volume of 32 (equal to our number of strings).

25   Cf. Farmer 1976, 194.

26   The *nuzha* is depicted in the MS *Bodleianus* Marsh 521, f. 158r (1333/34 AD), cf. Farmer 1976, 96 and fig. 82. The drawing is deficient at the first, the last and the last but two pair
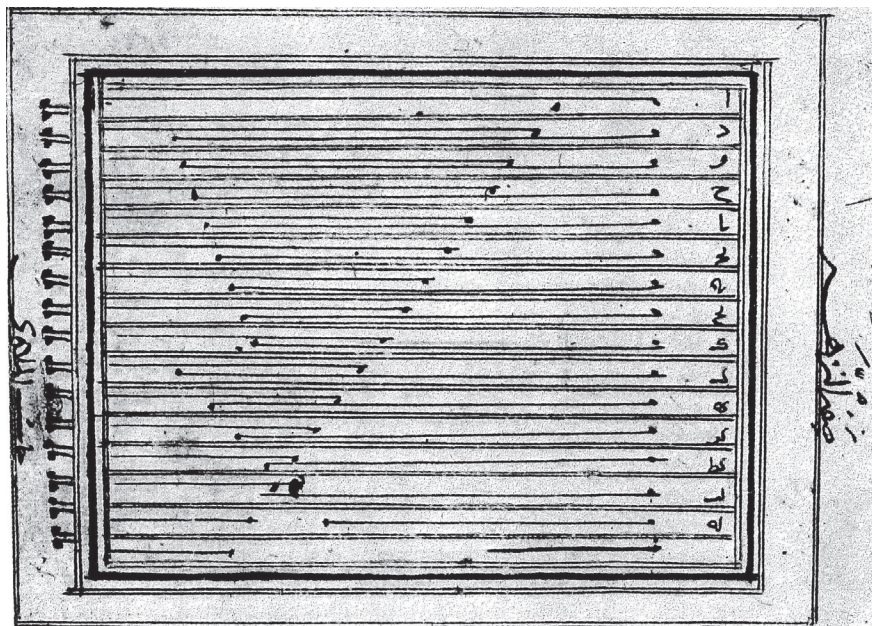
FIGURE 2   *Oxford, Bodleian Library Ms. Marsh 521, f. 158r. (1333/34) (cf. Farmer 1976, 97).*

These were arranged in two registers of 16 strings each: one set starts from the left and ends near a simple diagonal, with long strings near the top of the drawing and shorter ones near the bottom. The symbols near the right margin of the instrument refer to these strings: Arabic letters as numbers, used here to indicate note values. The series of numbers is 1, 4, 6, 8, 11, 13, 15, 18, 20, 22, 25, 27, 29, 32, 35 (the last cell remains void), the series of notes *A, B, c+, d, e, f+, g, a, bb+, c', d', eb+', f', g', a'*, where *c+*, for example, indicates a value about a large quartertone above *c*,[27] more exactly a mean third over *A* that is closer to *c#* than to *c*. This corresponds to the old Arabian lute of five strings tuned in fourths (*A, d, g, c', f'*), but without halftones (between 8 = *d* and 11 = *e*, for example, 9 = *eb* and 10 = *d#* could be inserted).[28] So the whole series constitutes a

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of strings, but the reader can easily correct this. For further information on the *nuzha*, in particular from the Persian *Kanz al-tuhaf* (14th century), cf. Farmer 1931, 12-4.

27   On the lute of Şafī al-Dīn even 90 cent, i.e. almost a halftone (cf. Manik 1969, 56).

28   I thank Eckhard Neubauer for the information on the Arabic letters in the *nuzha* drawing. Cf. also Manik 1969, 52-7 (who starts with *c* in the bass).

diatonic scale of two octaves plus an additional note at the end[29]—just as the right hand column of the *hormasia*. The second set of 16 strings starts from a vertical line on the right and ends in a broken diagonal near the left side, with longer strings than the first set. The break-point is between the 9th and 10th string, where the scale leaps back into the lower region—just as in the left column of the *hormasia*. The detailed tuning of this register obviously differs from that of the left *hormasia* column,[30] but on the whole the correspondence between the *nuzha* and the *hormasia* table suggests that the latter may well be interpreted as a tuning or stringing plan for a rectangular psaltery (*plinthion*). It must be remarked that near the left margin of the *nuzha* only the first set of strings reaches the end, while near the right margin only the second set approaches it, so that both registers can be played separately. This feature may be assumed for the *plinthion*, too (in the relevant cases).

The interpretation of the *hormasia* as a stringing plan for a doubly registered psaltery does not exclude its use as a scheme for adding a second voice as described above: the second voice results automatically, if both hands perform strictly parallel movements. But the two registers also offer other possibilities, which may appear more appropriate: drones (single notes such as *d* or *c'*, or chords such as *d-d'*, *d'-a'* and *c'-g'*), parallel movements in octaves or fifths, playing in unison for parts of the melody, repetition of a note by using both registers alternately, quick alternation *g'-g'* or *c'-c'* with the left hand only, and so on. In this interpretation, the link between the two notes of any row in the original table may seem to be primarily not a musical link, but a link given by the neighbourhood of the strings on the soundboard of the psaltery. We have to ask, however, why this neighbourhood, except for the seventh *b-a'*, always combines two notes that form a consonance in the modern sense, among others the third (and tenth), although this interval is far from sounding pure in the Pythagorean tuning[31] which is usually presupposed for the Middle Ages. The left register and then the right one were certainly given a Pythagorean tuning in the beginning, in the way described by Jan, but thereafter presumably the tuning was adjusted so that the thirds (and tenths) sounded more pure and that at the same time the basic fifths and fourths remained acceptable. This procedure results in a mean-tone tuning, it will have developed

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29   The last note is left without symbol in the drawing.

30   The angles of the broken diagonal suggest, that the first part might be chromatic (and the second part perhaps less than heptatonic).

31   The major Pythagorean third constitutes the proportion 64:81, the pure third 64,8:81 and the equally tempered one c. 64,29:81. Thus the Pythagorean third is even less pure than the equally tempered one.

from musical practice. Finally, the adjective κοινή ("common") in the *hormasia* heading makes some sense in this way: the notes of both columns should fit to each other (pairwise). It must be remarked here that Gaudentius lists the third among the half-consonances (παράφωνοι), which appear, according to his words, consonant when played on instruments (ἐν δὲ τῇ κρούσει φαινόμενοι σύμφωνοι).[32] This is best understood, if Gaudentius refers to an instrumental practice in mean-tone tuning, which really makes use of the purer thirds, for example by adding a second voice according to the scheme of the *hormasia*.

Besides the two-note chords of the *hormasia*-table, probably others were sometimes used, such as further fifths or fourths, and occasionally also dissonances, such as the seventh *a'-b* of the *hormasia*.[33] But the strict application of the *hormasia*-scheme guarantees a certain balance of sound. Low notes of the melody (right hand, no. 2 to no. 5) are associated with high notes of the second voice (left hand), but for the highest notes of the melody (no. 10 to no. 16) the second voice is low. So the scheme excludes that both voices are very low or very high simultaneously. This feature, too, suggests that the *hormasia* was more than a tuning instruction.

In the *hormasia*, the mean-tone tuning may have been established in the following way. After the first Pythagorean tuning, the basic chords *d'-a'* and *c'-g'* in the left hand remain unchanged,[34] while *e'* and *b*—without changing this fourth—are slightly lowered, so that *c'-e'*, *e'-g'* and *g-b'* become purer, and while conversely *bb* and *f'* are slightly raised to make *d'-f"*, *f'-a'* and *bb-d"* more consonant. In this way all of the intervals listed below the above diagram could be made pure—with two exceptions: *a-c"* would remain Pythagorean, i.e. too small, and *c'-f'* would become too large. This problem, however, can be reduced by distributing the impurities. So from the beginning the whole tone between the basic chords *d'-a'* and *c'-g'* could be made a little smaller.[35] This would already greatly enhance the mentioned thirds and tenths, even if *e'* and *b* are derived from *a'* by pure fifths (and octaves), and *f'* and *bb* from *c'* analogously. Furthermore, these fifths, as well as those in *d'-a'* and *c'-g'*, can be slightly reduced for the same purpose, and so on, until the whole tuning becomes acceptable. There is, however, another possibility that must be taken

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32 Cf. Jan 1895, 338,2-7. See West 1992, 206 ("which sound concordant in the accompaniment"), together with n. 41. According to [Longin.] *Subl.* 28,1 (Prickard 1961), the half-consonances (*paraphōnoi*) made the note of the melody more pleasurable: διὰ τῶν παραφώνων καλουμένων ὁ κύριος φθόγγος ἡδίων ἀποτελεῖται.

33 For the use of dissonances in ancient Greek music cf. West 1992, 206f.

34 *g'* is best found by means of the *g* of the right hand.

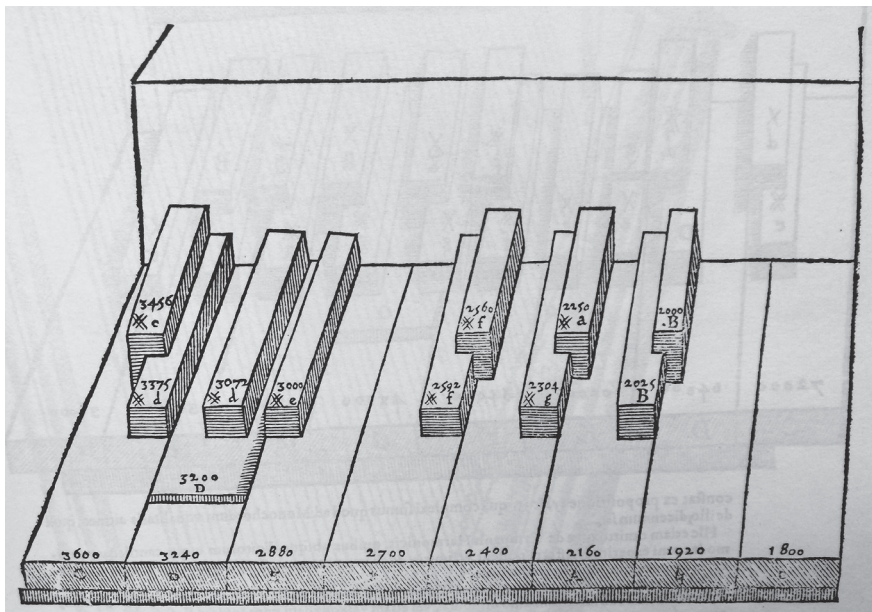35 A mean-tone, in the literal sense, between 8:9 and 9:10.

FIGURE 3   *Mersenne,* Harmonica, *part II, 67 (1648)².*

into account. As stated above, a Pythagorean tuning of *d'-a'* and *c'-g'* (by pure fifths) and a subsequent adjustment of *e'* and *b* as well as of *f'* and *bb* in pure thirds would leave *c'-f'* (7th column of the diagram) too large, because *f'* would have been raised. Now, this defect can be compensated by raising also the *c'* below *f'*, while the first *c'*, below *e'*, remains unchanged. If *c''* (11th column) is raised accordingly, also the previoulsy Pythagorean *a-c''* becomes more pure. Similarly the second *g'* (below *d'*, 5th column) could be tuned a little lower than the first (below *c'*, 4th column), if the basic chord *d'-a'* was a little lowered. This method may explain why *c'* and *g'* each appear twice in the left hand row.[36] The resulting tuning may be regarded as a mixture of mean-tone tuning and pure tuning.

A similar method occurs in the 16th/17th century. Mersenne (1648, part 2, 67; cf. Figure 3) presents a keyboard with a double key for *D*, more exactly with a lower *D* a small tone over *C* (3600:3240 = 10:9) and with a higher *D* a Pythagorean whole tone over *C* (3600:3200 = 9:8). Starting from there, he arranges *D-A-E-B*

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36   The other double occurrences (*d'*, *e'* and *f'* at the end) present no problem: without the
      leap into the lower octave between the 9th and 10th note they would read *d''*, *e''* and *f''*.

in pure fifths over the lower *D*, and accordingly *F-C-G-D* below the higher one. This shift by a syntonic comma (3240:3200 = 81:80) yields pure thirds (5:4 and 6:5) on the white keys, i.e. throughout the diatonic scale. The double *D*-key appears also in Zarlino (1588, 156).[37]

As mentioned above, the similarity of the *nuzha* drawing and the *hormasia* table suggests, that in Byzantine times, probably not before 1040, the ancient system of the *hormasia* seems to have been used as a stringing plan for a psaltery with two registers, e.g. a *plinthion* of the rectangular type. Such an instrument may have appeared useful even without the originally intended mean-tone tuning. Now, the *nuzha* is said to have been invented in the 13th century by Şafī al-Dīn 'Abd al-Mu'min. This statement could mean that he simply transfered a Greek *plinthion* to the Arabic world by altering and adapting the tuning, but the word 'invention' would seem to fit better, if he derived a really new instrument from a Greek model. Such a model might also have been a triangular psaltery (harp psaltery) strung on both sides of its soundboard.

The harp psaltery is well documented in Byzantine miniatures of contemporary scenes. Sometimes, it was apparently called πτερόν, "wing" (Hagiopolites 96/97),[38] just as in the Latin West triangular forms of the psaltery were called sometimes *ala.*[39] In the Arabic world, the harp psaltery was also called *ǧank mişrī* (Egyptian harp); it had a wooden soundboard that filled the triangular form, and, at least around 1300 in Egypt, on each side of this soundboard was a separate set of strings. The playing of the right hand was called *tamkīn*, "powerful", that of the left hand *mu'īn*, "supporting".[40] This seems to have been similar for Byzantine instruments: Two miniatures in the chronicle of Ioannes Skylitzes in Madrid (12th century) show the harp psaltery from its left side in action, i.e. played by the left hand, while the right side, and the right hand, are hidden by the soundboard (cf. Figures 4f.).[41]

Since it is not likely that both miniatures intended to show left-handed players, we may fairly assume that the right hand played its own set of strings.

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37   I.e. in the same book where he deals with the *hormasia*. For these tunings cf. also Ratte 1991, 412.

38   Cf. Raasted 1983, 85f.; in other contexts, *pteron* could also mean the *syrinx*, cf. Anonymus Bellermanni 2.17 (Najock 1972, 78f.).

39   Cf. Dräger 1962, 1713. In Spain, the harp psaltery was depicted in the *Cantigas de Santa Maria*, even with a rosette in the soundboard (13th century, second half), cf. Farmer 1976, 106f.

40   Cf. Farmer 1976, 102.

41   Cf. Tsamakda 2002, fig. 192 (illustration to Skylitzes 109,24-110,43 Thurn) and fig. 358 (illustration to Skylitzes 258,54ff. Thurn).

FIGURE 4   *Madrid, Gr. Vitr. 26-2, f. 78v. (12th century) (cf. Tsamakda 2002, fig. 192).*

FIGURE 5   *Madrid, Gr. Vitr. 26-2, f. 145r. (12th century) (cf. Tsamakda, 2002 fig. 358).*

But was it possible to string the triangular harp psaltery in such a way that the *hormasia* tuning could be realized? While this, obviously, presents no problem for the simple scale of the right *hormasia* column, the leaps of the left column may appear to be incompatible with the regularly decreasing string lengths of a triangular instrument. A simple example, however, may demonstrate that such leaps and even greater ones could be realized. The pandora of the late Renaissance in western Europe, around 1600, had metal strings of almost equal length that differed by intervals of up to two octaves (when strung with almost equal tensile force). More or less the same holds for the gut strings of the lutes and viols of that time. In all of these cases, however, the strings of the bass region had to be made of two or more thinner strings by twisting. Such strings are mentioned in an Arabic source of 1418,[42] and it is said there that "they were made of twisted copper". Thus the leaps of the left *hormasia* column could be realized on the harp psaltery. In particular, the short strings of the notes no. 10 to no. 16 (left hand *g* to *f'*) should have been thick and twisted, while the long strings of the four high notes near the beginning (*d', a', g', g'*) should have been rather thin, unless they were shortened by special movable bridges on the soundboard. This last possibility, perhaps in combination with reduced diameters, seems to be preferable, and small movable bridges are attested at least on the rectangular psaltery (cf. Figure 6).[43]

It may be left open here, whether the *nuzha* was derived from the triangular harp psaltery or from a rectangular model such as the *plinthion* or even from the very *hormasia* table. While the term 'invention' may be regarded as an argument in favour of the harp psaltery, the rectangular form of the *nuzha* may also be regarded as an argument in favour of the *plinthion* or the *hormasia* table. The main point of the preceding sections is that the Byzantine psaltery, both in the rectangular and the harplike form, was apt to be tuned and played according to the *hormasia* scheme, if furnished with two registers of strings. Indeed, these psalteries were even more suitable for this purpose than the harp or the organ with one register, since the two registers—besides other possibilities—enabled the playing of a schematic two-voice-version with strictly parallel movements in both hands. These two-voice-versions were at least a little less monotonous than the faux bourdon of the late Middle Ages and the improvised singing of thirds in the Alpine regions. Certainly they could be modified more or less freely, according to the skill of the player, and the presence of both *b* and *b* flat even offered the possibility of simple modulation and chromaticism.

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42   Cf. Farmer 1931, 14.
43   Cf. Cutler 1984, fig. 78 and 116; Maliaras 2007, fig. 34f.

FIGURE 6   *Athos, Batopediou 851, f. 123v. (late 12th century) (cf. Cutler, 1984 fig. 78).*

Up to this point, only the diatonic Hypolydian scale has been taken into account, i.e. the notes as preserved in the *hormasia* table, but on the right margin of the table follows a series of further scale names which seem to indicate that previously there were similar tables for these scales, although none of them has been preserved. Indeed it is likely that such tables existed and that they had 16 rows, as the preserved *hormasia*, because they most probably referred to the same instrument. The scales in question come from all three genera: diatonic (Hyperlydian, Hyperaiolian, Lydian, Hyperiastian), chromatic (Hypoiastian, Lydian) and enharmonic (Lydian, Hyperphrygian, Hyperiastian). We shall ask

now, whether—and how far—the above interpretation of the Hypolydian scale is compatible with the other scales mentioned. This question will be discussed in two different approaches.

In the first approach I shall assume for simplicity, that the right hand sequence always starts from *lichanos mesōn* (as in Hypolydian), although this seems to be unrealistic. Under this assumption it will be sufficient to regard—in all three genera—the Hypolydian scale, since the other scales can be reached by mere transposition. So it is immediately clear, that all the diatonic scales are compatible with the above interpretation, since the whole system with all its properties would be shifted to a different pitch. In fact, I would not favour such a uniform solution, but it is sufficient to show compatibility.

In the chromatic and enharmonic cases, the left hand sequence should first be given the Pythagorean tuning of the diatonic system, thereafter the φθόγγοι κινούμενοι have to be lowered where necessary (see below), and the result can then be copied to the right hand sequence. Finally both sequences may be adjusted by ear (distribution of impurities is always possible). The most simple chromatic scale can be deduced from the diatonic one by lowering the *lichanoi* and *paranētai* by a half-tone. In Hypolydian, *g* must be replaced by *g* flat (denoted here by *gb*), and *d* by *d* flat (denoted here by *db*), *gb* can be added with reference to *b*, and *db* with reference to *gb*.[44] With these changes, the *hormasia* table would read as follows:

Hypolydian, chromatic

right hand	gb	*a*	b	c'	db'	e'	f'	gb'	a'	b'	c"	db"	e"	f"	gb"	a"
left hand	db	db'	a'	gb'	gb'	c'	c'	e'	f'	gb	a	bb	b	db'	e'	f'
intervals	4	3	7	trt	4	3	4	2	3	11	10	10	11	10	9	10

The intervals obtained may be regarded as acceptable, since Gaudentius, loco citato, lists the tritone (here *c'-gb'*, denoted by *trt*) among the half-consonances (paraphones), and the whole tone (here *e'-gb'*) is attested by

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44   It would be possible, of course, to derive *d* flat proper from *bb* by two intermediate fifths (*e* flat and *a* flat, both used only temporarily), but in practice it seems preferable to derive *db* and *gb* as *c#* and *f#* from *b* (cf. our 'enharmonic confusion'). The fifths (or fourths) in *a – e – b – f# – c#* as well as those in *bb – f – c* may be tuned slightly smaller than pure.

[Arist.] *Prob.* 19.12 (*paramesē* + *mesē*) and probably by [Plut.] *Mus.* 19 (*nētē* + *paranētē*). Thus the main features remain valid in the chromatic case: initial Pythagorean tuning of the left and right hand rows and subsequent adjustment of both rows by ear, in the sense of a mean-tone tuning. Nevertheless, I would not pretend that the above diagram is a good solution of the chromatic case. In particular the higher scales (from Lydian to Hyperlydian, in all three genera) should better start from a note lower than *lichanos mesōn* in the right hand, and a different arrangement of the left hand sequence may appear preferable.

In the enharmonic case, first the Pythagorean diatonic scale is established, with *d* and *g* as auxiliary notes, then the auxiliary *d*- and *g*-notes are superseded by the previously established c- and *f*-notes, and finally the initial c-, *f*- and *bb*-notes are lowered a quarter-tone by estimation or measurement[45], so that *b*+, *e*+ and *a*+ are reached.[46] Thus we have *a*, *e*, *b* (and octaves) as ἑστῶτες, *f* and *c* (plus octaves) as *lichanoi* and *paranētai*, and the newcomers *b*+, *e*+, and *a*+ as *parhypatai* and *tritai*. Again the two rows might be adjusted by distributing impurities, but we shall see that almost no third or tenth is left. Parallel action of both hands will produce three types of intervals: those within the group *a*, *e*, *b*, *f*, *c* and those within *b*+, *e*+, *a*+ are essentially the same as in the diatonic and chromatic cases, but those combining *b*+, *e*+ or *a*+ with *a*, *e*, *b*, *f* or *c* present a new quality. These last intervals must probably be regarded as sharp dissonances that ask for resolution. Such resolutions are possible, for example by means of double occurrences of certain notes in the left hand (cf. *c'* below *e'* and *f'* in the diatonic case). In the following enharmonic version of the *hormasia* table, the second row (left hand 1) contains a mechanical adaption of the given diatonic sequence to the enharmonic genus, while in the third row (left hand 2) a few notes are tuned to neighbouring pitches. Changes of this type will make the parallel action of both hands more tolerable for modern ears:

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45   Tuning by measurement is possible by means of small movable bridges. The note *e*+, for example, will be found, if the bridge positions for *e* and *f* (determined by fifths) are marked on the sound-board and a mark for *e*+ is inserted just in the middle. This position corresponds to the arithmetic mean, which in such cases was used by Boethius, cf. Najock 2006, 122-4. In the case of *e*+, the marks for *e* and *e*+ may have been fixed on the sound-board by the instrument maker. The abbreviation *M\A*, given for some notes in the *hormasia* table, may in fact have been an indication that the respective string should be tuned by means of a small movable brigde (*magas*).

46   The plus symbol is used here to indicate that a note is raised by a quarter-tone.

Hypolydian, enharmonic

right hand	*f*	<u>*a*</u>	*b*	*b+*	*c'*	*e'*	*e+'*	*f'*	*a'*	*b'*	*b+'*	*c"*	*e"*	*e+"*	*f"*	*a"*
left hand 1	*c*	*c'*	*a'*	*f'*	*f'*	*b+*	*b+*	*e'*	*e+'*	*f*	*a*	*bb*	*b*	*c'*	*e'*	*e+'*
left hand 2	*c*	*c'*	*a'*	*f'*	*f'*	*b+*	*b+*	*e'*	*e'*	*f*	*a*	*a*	*b+*	*b+*	*e'*	*e'*
Comment				*resol.*	*resol.*						*resol.*	*resol.*				

It must be remarked here that all notes of the third row already occur in the second row, albeit sometimes at different places. This means that the same two-voice music can be played with the second row, if the action of both hands is not bound to strict parallelism. In addition, the second row allows longer chains of dissonances than the third row. Furthermore, it should be remarked that the resolutions indicated are all in the upright direction and that it may appear preferable to replace *b+* by *b* in the third row.

The second approach is not based on transposition of the *hormasia* scheme to other pitches, but on adaption of the scheme to other sections of the Greater System. Since all scales mentioned probably refer to the same stringed instrument, the pitch of the single strings can be changed only by small amounts. So it would be impossible in practice to reach all our scales by mere transposition. Instead the sections extracted from the (extended) Greater System should move. It is not unlikely, therefore, that in all these scales the right hand sequence begins with more or less the same note *g*: *lichanos mesōn* in Hypolydian, but *proslambanomenos* in Hyperlydian, our highest scale, and *tritē synhēmmenōn* in Hypoiastian, our lowest scale.[47] In fact this very *g* (= Φ/F) occurs in all the scales regarded (at least in their diatonic versions), except in Hyperaiolian, and Hyperaiolian is the only scale that occurs twice in our list. So one version of Hyperaiolian may have started in the right hand with *f#* (*proslambanomenos*), and the other version with *g#* (*hypatē hypatōn*). This seems to be a strong indication that the other right hand sequences started with *g* as far as possible.[48] The highest note would always be close to *a"*, a whole tone above *nētē hyperbolaiōn* in Hyperlydian. Thus the right hand sequences would read as follows:

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47   By the use of *tritē synhēmmenōn*, Hypoiastian becomes equivalent to Iastian, where the same note is *parhypatē mesōn*. But Hypoiastian requires *g#*, Iastian *g* (cf. Jan 1895, 393f.).

48   Enharmonic Lydian requires *f*, chromatic Lydian requires *gb*, enharmonic Hyperiastian requires *f#+* and chromatic Hypoiastian requires *g#*.

Right hand sequences[49]

hypolyd.d	*g*	<u>*a*</u>	*b*	*c'*	*d'*	*e'*	*f'*	*g'*	*a'*	*b'*	*c"*	*d"*	*e"*	*f"*	*g"*	*a"*
hyperlyd.d	*g*	*a*	*bb*	*c'*	*d'*	*eb'*	*f'*	<u>*g'*</u>	*a'*	*bb'*	*c"*	*d"*	*eb"*	*f"*	*g"*	*a"*
hyperaiol.d	*f#*	*g#*	*a*	*b*	*c#'*	*d'*	*e'*	<u>*f#'*</u>	*g#'*	*a'*	*b'*	*c#"*	*d"*	*e"*	*f#"*	*g#"*
hypoiast.c	*g#*	*a*	*bb*	*c#'*	*d'*	*eb'*	<u>*f#'*</u>	*g#'*	*a'*	*bb'*	*c#"*	*d"*	*eb"*	*f#"*	*g#"*	*a"*
hyperaiol.d	*g#*	*a*	*b*	*c#'*	*d'*	*e'*	<u>*f#'*</u>	*g#'*	*a'*	*b'*	*c#"*	*d"*	*e"*	*f#"*	*g#"*	*a"*
lyd.d	*g*	*a*	*bb*	*c'*	<u>*d'*</u>	*e'*	*f'*	*g'*	*a'*	*bb'*	*c"*	*d"*	*e"*	*f"*	*g"*	*a"*
lyd.c	*gb*	*a*	*bb*	*b*	<u>*d'*</u>	*e'*	*f'*	*gb'*	*a'*	*bb'*	*b'*	*d"*	*e"*	*f"*	*gb"*	*a"*
lyd.e	*f*	*a*	*a+*	*bb*	<u>*d'*</u>	*e'*	*e+'*	*f'*	*a'*	*a+'*	*bb'*	*d"*	*e"*	*e+"*	*f"*	*a"*
hyperphr.e	*g*	*g+*	*ab*	*c'*	*c+'*	*db'*	<u>*f'*</u>	*g'*	*g+'*	*ab'*	*c"*	*c+"*	*db"*	*f"*	*g"*	*g+"*
hyperiast.d	*g*	*a*	*b*	*c'*	*d'*	<u>*e'*</u>	*f#*	*g'*	*a'*	*b'*	*c"*	*d"*	*e"*	*f#"*	*g"*	*a"*
hyperiast.e	*f#+*	*g*	*b*	*b+*	*c'*	<u>*e'*</u>	*f#'*	*f#+'*	*g'*	*b'*	*b+'*	*c"*	*e"*	*f#"*	*f#+"*	*g"*

This table shows at once why Hypoiastian is inserted between the two versions of diatonic Hyperaiolian in the given list of scales: In the diatonic case it would be virtually identical with the second version (which starts from *g#*), only the chromatic alteration by *bb* and *eb* makes a difference.

Analogously, the left hand sequences of our scales can be derived by introducing to the given Hypolydian one the necessary alterations (sharps, flats, etc.). Only the note *bb*, *tritē synhēmmenōn* in Hypolydian, presents a certain difficulty, because the respective column does not represent the *tritē synhēmmenōn* in the other scales: the Greater System often has no room for a special note here, so that the former *tritē synhēmmenōn* can become equal to its right neighbour, especially if this neighbour has to be lowered. The left hand sequences will read as follows:

Left hand sequences, mechanical adaption

hypolyd.d	*d*	*d'*	*a'*	*g'*	*g'*	*c'*	*c'*	*e'*	*f'*	*g*	*a*	*bb*	*b*	*d'*	*e'*	*f'*
hyperlyd.d	*d*	*d'*	*a'*	*g'*	*g'*	*c'*	*c'*	*eb'*	*f'*	*g*	*a*	*bb*	*bb*	*d'*	*eb'*	*f'*
hyperaiol.d	*?*	*d*	*d'*	*a'*	*g#'*	*g#'*	*c#'*	*c#'*	*e'*	*f#'*	*g#*	*a*	*bb*	*b*	*d'*	*e'*
hypoiast.c	*d*	*d'*	*a'*	*g#'*	*g#'*	*c#'*	*c#'*	*eb'*	*f#'*	*g#*	*a*	*bb*	*bb*	*d'*	*eb'*	*f#'*

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49 The *mesai* have been underlined in the table (in Hypoiastian, however, *nētē hyperbolaiōn*). The extensions of the abbreviated scale names—'d', 'c' and 'e'—mean diatonic, chromatic and enharmonic.

hyperaiol.d	d	d'	a'	g#'	g#'	c#'	c#'	e'	f#'	g#	a	bb	b	d'	e'	f#'
lyd.d	d	d'	a'	g'	g'	c'	c'	e'	f'	g	a	bb	bb	d'	e'	f'
lyd.c	d	d'	a'	gb'	gb'	b	b	e'	f'	gb	a	bb	bb	d'	e'	f'
lyd.e	d	d'	a'	f'	f'	bb	bb	e'	e+'	f	a	a+	a+	d'	e'	e+'
hyperphr.e	c+	c+'	g+'	g'	g'	c'	c'	db'	f'	g	g+	ab	ab	c+'	db'	f'
hyperiast.d	d	d'	a'	g'	g'	c'	c'	e'	f#'	g	a	bb	b	d'	e'	f#'
hyperiast.e	c	c'	g'	f#+'	f#+'	b+	b+	e'	f#'	f#+	g	b	b	c'	e'	f#'

The first Hyperaiolian (3rd row), which in the right hand starts a whole tone below the second Hyperaiolian (5th row), repeats this shift also in the left hand sequence. Therefore the first cell in the third row remains undetermined, denoted in the table by a question mark, but *c#* or a second *d* might fit. It seems not advisable to shift this row by one column to the left, since the second Hyperaiolian must fit to Hypoiastian, and the notes of Hypoiastian are determined. Apart from the content of this cell and the above-mentioned alterations of Hypolydian *bb*, the table presents no problems, so that it can be regarded as a sufficient base for further interpretation.

The Hypolydian left hand sequence—the only transmitted one—can be divided into two parts (with a short overlap): the first seven notes (*d-d'-a'-g'-g'-c'-c'*) and the last eleven notes (*c'-c'-e'-f'-g-a-bb-b-d'-e'-f'*). The first part presents mainly leaps, in particular the octave and two fifths, while the second part proceeds mainly by steps, including a leap to the lower octave. Furthermore, the second part moves roughly parallel to the corresponding right hand part, mainly in thirds and tenths, while in the first part other intervals prevail. The structural difference of these parts is so clear that they will be discussed now separately.

The first part displays a typical bourdon-structure, in Hypolydian mainly by the two-note-chords *d-d'*, *d'-a'* and *c'-g'*.[50] As a main bourdon, d-d' fits perfectly to the Lydian scale, since *d* is the Lydian *proslambanomenos*, but it fits also well to Hypolydian and Hyperlydian, which are closely linked to Lydian by *synhēmmenōn*-tetrachords. The qualities of the bourdon-triplet *d-d'*, *d'-a'* and *c'-g'* are obvious: If thirds are admitted as consonances, every note of *eb*, *bb*, *f*, *c*, *g*, *d*, *a*, *e*, *b* and *f#* can be accompanied in consonance with one of these three two-note-chords, and if the tritone is admitted, *g#/ab* almost

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50   It was possible, of course, to strike *d-d'-a'* together, i.e. the first three strings, just as *g'-g'-c'-c'*, the next four strings, could be struck together, but right hand *b* and *b'* are dissonant with both of these chords. Nevertheless, this may have been the method of beginners.

completes the series of 12 half-tone-steps, only *c#*/*db* remains unmatched[51]. If we concentrate on the first seven columns of the above table (mechanically derived left hand sequences), we see that this part of the table constitutes a wonderful system of such bourdon-triplets. The above-mentioned one occurs four times, in Hypolydian, Hyperlydian, Lydian and Hyperiastian, all diatonic, while in Hyperaiolian, the remaining diatonic scale, *c'-g'* is replaced by *c#'-g#'*. In Lydian, diatonic *c'-g'* is replaced by *b'-gb'* in the chromatic and by *bb'-f'* in the enharmonic version. Similarly the enharmonic version of Hyperiastian has its characteristic bourdons, *b+-f#+'* in place of *c'-g'* as well as *c-c'* and *c'-g'* in place of *d-d'* and *d'-a'*. Enharmonic Hyperphrygian retains *c'-g'*, but replaces *d-d'* by *c+-c+'* and *d'-a'* by *c+'-g+'*. The bourdons of chromatic Hyperiastian, as should be expected, do not differ from those of the second diatonic Hyperaiolian.[52] Thus our system of bourdon-triplets reflects much of the modal characteristics of the scales. Altogether it appears so well-structured that it should not be changed, even if certain dissonances might appear when used together with the right hand.

We have to ask now, whether the bourdon-triplets are sufficient to accompany every note of the respective right hand scales in consonance or half-consonance, i.e. whether they could be used for a proper chordal accompaniment. The above remarks have already shown that *d-d'*, *d'-a'* and *c'-g'* are sufficient for every diatonic or chromatic scale that does not contain *c#* (and eventually *g#*), i.e. for Hypolydian, Hyperlydian, diatonic and chromatic Lydian and diatonic Hyperiastian. The scales containing *c#* (and *g#*) are diatonic Hyperaiolian and—almost identical—chromatic Hypoiastian, and for these scales the bourdon chord *c#'-g#'* appears in place of *c'-g'*. In fact this proves to be sufficient, as can easily be checked. In chromatic Lydian, with the bourdon chord *b-gb'* (or *b-f#'*) in place of *c'-g'*, only right hand *e'* presents a problem, since it produces a dissonance both with *d'* and *gb'* (or *f#'*), in both cases a whole tone. But *e'* is *paramesē* and *d'* is *mesē* in Lydian, and it has already been remarked that the whole tone, in particular the whole tone between *mesē* and *paramesē*, was an accepted dissonance.[53] Thus our bourdon-triplets are sufficient to accompany all the diatonic and chromatic scales as consonant or half-consonant chords, with the singular exception of *d-d'* for *e'* in Lydian. The following examples of diatonic and chromatic Lydian may demonstrate the procedure:

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51   But *c#*/*db* could be accompanied in consonance with *a'* alone.

52   The first diatonic Hyperaiolian is merely a shifted version of the second one.

53   It would be possible, of course, to accompany *e'* by *a'* as a single-note bourdon, but the system of two-note bourdons appears preferable.

Lydian, diatonic: assignation of chords (d-d', d'-a', c'-g')[54]

right hand	g	a	bb	c'	*d'*	e'	f'
accompaniment	c'-g'	d'-a'	d-d'	c'-g'	d'-a'	d-d', c'-g'	d'-a'

Lydian, chromatic: assignation of chords (d-d', d'-a', b-gb')

right hand	gb	a	bb	b	*d'*	e'	f'
accompaniment	b-gb'	d'-a'	d-d'	b-gb'	d'-a'	d-d'	d'-a'

For a better understanding of the chromatic and especially the enharmonic cases, it is useful to recall here the fundamental differences of these genera in comparison with the diatonic genus. For this purpose the example of the Lydian scale, from *proslambanomenos* to *paramesē*, will suffice:

diatonic	d	e	f		g	a	bb	c'	d'	e'
chromatic	d	e	f	f#		a	bb	b	d'	e'
enharmonic	d	e	e+ f			a	a+	bb		d'	e'

The tritone *e-bb* occurs both in the diatonic and the chromatic scale in its genuine form (in the enharmonic scale it appears diminished to *e-a+*, while enharmonic *e-bb* corresponds to diatonic *e-c'* and chromatic *e-b*). In the chromatic scale, an additional tritone *f-b* appears, since diatonic *c'* is diminished to *b*. This tritone is essentially a diminished fifth, but for convenience it is called simply tritone. Similarly, chromatic *e-f#* and *a-b* will be called for convenience seconds, although they are essentially diminished thirds, corresponding to diatonic *e-g* and *a-c'* respectively. Furthermore, a special chromatic fourth *b-e'* can be observed, essentially an augmented major third that corresponds to diatonic *c'-e'*, and similarly a special chromatic third *d-f#*, essentially a diminished fourth corresponding to diatonic *d-g*. For the rest, the chromatic thirds are equal or

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54   Note that the chords change from step to step.

similar to the diatonic ones: *d-f, f-a, bb-d* and *f#-bb* (minor > major). In sum we can state that the chromatic scale is similar to the diatonic one with respect to the occurrence of consonances and half-consonances, but that an additional tritone and two special seconds occur, which—by virtue of their function in the Greater System—should be regarded as admitted dissonances: *f-b, e-f#* and *a-b*. Admitted dissonances—as a third category besides consonances and half-consonances—will prove particularly helpful in the enharmonic case.

In the diatonic scale, every triplet of adjacent notes, or strings, forms a third by its outer members, e.g. *d-f, e-g, f-a*, etc. These thirds are essential for accompaniment in half-consonance, but virtually all of them are replaced by dissonances in the enharmonic scale:

diatonic thirds	*d-f*	*e-g*	*f-a*	*g-bb*	*a-c'*	*bb-d'*	*c'-e'*
enharmonic equiv.	*d-e+*	*e-f*	*e+-a*	*f-a+*	*a-bb*	*a+-d'*	*bb-e'*

Perhaps all of these 'enharmonic equivalents' should be regarded as admitted dissonances—by virtue of their function in the Greater System. Of particular interest are the minor seconds *e-f* and *a-bb*: They are sharp dissonances, but they correspond to diatonic *e-g* and *a-c'* in the Greater System. As doubly diminished minor thirds they should perhaps be regarded as admitted dissonances. Nevertheless a few thirds emerge in the enharmonic scale: *d-f* (corresponding to diatonic *d-g*, doubly diminished), *f-a* (corresponding to diatonic *g-a*, doubly augmented) and *bb-d* (corresponding to diatonic *c-d*, doubly augmented). Also special tritones arise: *e-bb* (corresponding to diatonic *e-c*, doubly diminished) and *bb-e'* (corresponding to diatonic *c-e'*, doubly augmented), but diatonic (and chromatic) *e-bb* is replaced by enharmonic *e-a+*. The fourths and fifths in the fixed notes *d-e-a-d'-e'* (ἑστῶτες) are the same as in the diatonic and chromatic scale, but in addition there is a special fourth *e+-a+*, and *f-bb* has a different function. In sum, enharmonic accompaniment may look quite unfamiliar nowadays. Since we have no genuine experience with enharmonic music, it seems at least conceivable that just the admitted dissonances were desired, even chains of such dissonances, which could effectively be resolved in consonances (as given by the chord triplets). Here follows my solution for the enharmonic scales in question:

Lydian, enharmonic: assignation of chords (d-d', d'-a', bb-f')

right hand	f	a	a+	bb	*d'*	e'	e+'
accompaniment	bb-f'	d'-a'	d-d'	bb-f'	d'-a'	bb-f', d-d'	d'-a'

Hyperphrygian, enharmonic: assignation of chords (c+-c+', c+'-g+', c'-g')

right hand	g	g+	ab	c'	c+'	db'	*f'*
accompaniment	c'-g'	c+'-g+'	c+-c+'	c'-g'	c+'-g+'	c'-g'	c+'-g+'

Hyperiastian, enharmonic: assignation of chords (c-c', c'-g', b+-f#+')

right hand	f#+	g	b	b+	c'	*e'*	f#'
accompaniment	b+-f#+'	c'-g'	c-c'	b+-f#+'	c'-g'	b+-f#+', c-c'	c'-g'

These systems of accompaniment, as well as those of the diatonic and chromatic scales, have been derived according to the following principles: The first and the fourth right hand note is always associated with the third chord, the second and the fifth right hand note with the second chord.[55] The reason is obvious: consonance by identity with one of the chord notes. The third right hand note is best associated with the first chord. In fact this is necessary, if the principle of changing chords is applied. According to this principle, two neighbouring right hand notes must be associated with different chords. This means that the chord of the third note should differ from those of the second and the fourth note, i.e. from the second and from the third chord. The sixth right hand note must be associated with the third chord, at least in the diatonic scales. In the chromatic scales, a dissonant whole tone will emerge in this place, *c#'-eb'* in Hypoiastian and *e'-gb'* in Lydian, but this dissonance is a diminished minor third, and it may even have been regarded as characteristic of chromatic accompaniment. In the enharmonic scales, this dissonance

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55   The fifth right hand note, mainly *d'*, is always identical with the second left hand note, so that it could also be associated with the first chord, mainly *d-d'*, but this would add almost nothing to the melody.

may even result as a half-tone, *e'-f'* in Lydian and *c'-db'* in Hyperphrygian,[56] but this half-tone, as a doubly diminished minor third, may have been regarded as characteristic of enharmonic accompaniment as well.[57] So the sixth right hand note could probably always be accompanied by the third bourdon chord. For the seventh right hand note, both the first and the second chord would fit.[58] It may be remarked here, that the described method of chordal accompaniment shows certain similarities with more modern methods, in particular with the use of three chords only: tonic, dominant and subdominant.[59] Now, these three chords can be complemented by their parallels, and similar complementary chords can be found in the right part of our left hand sequences as well: in Hypolydian, for example, *g-d'*, *a-e'* and *bb-f'*. But these chords had to be picked out by two fingers (in the appropriate span for a fifth), while the triplet chords from the left part could simply be struck by the thumb.[60]

It remains now to continue the discussion on the last eleven notes of the *hormasia*. The Hypolydian examples have already shown that strictly parallel action of both hands will produce a series mainly of thirds and tenths in the diatonic scale, interrupted only by a single fourth and a single eleventh, that in the chromatic scale an additional eleventh, a major second and its octave will be produced in place of diatonic thirds and tenths, altogether tolerable, but that in the enharmonic scale all diatonic thirds and tenths will be replaced by dissonances, only the fourth (7th note) and the eleventh (13th note) remain consonant. The following set of tables will show that these differences (and similar ones) are characteristic of the three genera in all the scales mentioned:[61]

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56   In Hyperphrygian, *db'* would even more conflict with *c+'*, which is part both of the first and second chord.

57   In enharmonic Hyperiastian, *e'-f#+'* is essentially a minor third that is diminished by a quarter-tone.

58   In the above examples, the second chord has been chosen.

59   Furthermore some traces of the method may have survived in traditional Byzantine choirs, especially the use of similar chords as sustained bourdons.

60   In short *arpeggio* or *rasgueado*.

61   The intervals are denoted as follows: '5' fifth, '4' fourth, 'trt' tritone, 'trt⁸' tritone plus octave, '3' minor or major third, '10' minor or major thenth, '2' major second, '2!' minor second, '9' major ninth, '9!' minor ninth, '7' minor seventh, '7!' major seventh. The plus and minus symbols indicate augmentation and diminution by a quarter-tone: '2+' augmented major second, '3-' diminished minor third, '3+' augmented major third etc. (a mean third, ca. 350 cents, does not occur). Note that the tables given in the first approach for chromatic and enharmonic Hypolydian can be regarded as a valid extension of the present set of tables.

Hypolydian, diatonic

right h.	g	*a*	b	c'	d'	e'	f'	g'	a'	b'	c"	d"	e"	f"	g"	a"
left h.	d	d'	a'	g'	g'	c'	c'	e'	f'	g	a	bb	b	d'	e'	f'
interv.	4	4	7	5	4	3	4	3	3	10	10	10	11	10	10	10

Hyperlydian, diatonic

right h.	g	a	bb	c'	d'	eb'	f'	g'	a'	bb'	c"	d"	eb"	f"	g"	a"
left h.	d	d'	a'	g'	g'	c'	c'	eb'	f'	g	a	bb	bb	d'	eb'	f'
interv.	4	4	7!	5	4	3	4	3	3	10	10	10	11	10	10	10

Hyperaiolian, diatonic (1)

right h.	f#	g#	a	b	c#'	d'	e'	f#'	g#'	a'	b'	c#"	d"	e"	f#"	g#"
left h.	?	d	d'	a'	g#'	g#'	c#'	c#'	e'	f#'	g#	a	bb	b	d'	e'
interv.	?	trt	4	7	5	trt	3	4	3	3	10	10	10	11	10	10

Hypoiastian, chromatic

right h.	g#	a	bb	c#'	d'	eb'	f#'	g#'	a'	bb'	c#"	d"	eb"	f#"	g#"	a"
left h.	d	d'	a'	g#'	g#'	c#'	c#'	eb'	f#'	g#	a	bb	bb	d'	eb'	f#'
interv.	trt	4	7!	5	trt	2	4	4	3	9	10	10	11	10	11	10

Hyperaiolian, diatonic (2)

right h.	g#	a	b	c#'	d'	e'	f#'	g#'	a'	b'	c#"	d"	e"	f#"	g#"	a"
left h.	d	d'	a'	g#'	g#'	c#'	c#'	e'	f#'	g#	a	bb	b	d'	e'	f#'
interv.	trt	4	7	5	trt	3	4	3	3	10	10	10	11	10	10	10

Lydian, diatonic

right h.	g	a	bb	c'	d'	e'	f'	g'	a'	bb'	c"	d"	e"	f"	g"	a"
left h.	d	d'	a'	g'	g'	c'	c'	e'	f'	g	a	bb	bb	d'	e'	f'
interv.	4	4	7!	5	4	3	4	3	3	10	10	10	trt^8	10	10	10

Lydian, chromatic

right h.	gb	a	bb	b	d'	e'	f'	gb'	a'	bb'	b'	d"	e"	f"	gb"	a"
left h.	d	d'	a'	gb'	gb'	b	b	e'	f'	gb	a	bb	bb	d'	e'	f'
interv.	3	4	7!	5	3	4	trt	2	3	10	9	10	trt^8	10	9	10

Lydian, enharmonic

right h.	f	a	a+	bb	d'	e'	e+'	f'	a'	a+'	bb'	d"	e"	e+"	f"	a"
left h.	d	d'	a'	f'	f'	bb	bb	e'	e+'	f	a	a+	a+	d'	e'	e+'
interv.	3	4	8-	5	3	trt	trt+	2!	4-	10+	9!	11-	12-	9+	9!	11-

Hyperphrygian, enharmonic

right h.	g	g+	ab	c'	c+'	db'	f'	g'	g+'	ab'	c"	c+"	db"	f"	g"	g+"
left h.	c+	c+'	g+'	g'	g'	c'	c'	db'	f'	g	g+	ab	ab	c+'	db'	f'
interv.	4+	4	8-	5	4+	2!	4	trt	2+	9!	11-	10+	11	11-	trt^8	9+

Hyperiastian, diatonic

right h.	g	a	b	c'	d'	e'	f#'	g'	a'	b'	c"	d"	e"	f#"	g"	a"
left h.	d	d'	a'	g'	g'	c'	c'	e'	f#'	g	a	bb	b	d'	e'	f#'
interv.	4	4	7	5	4	3	trt	3	3	10	10	10	11	10	10	10

Hyperiastian, enharmonic

right h.	f#+	g	b	b+	c'	e'	f#'	f#+'	g'	b'	b+'	c"	e"	f#"	f#+"	g"
left h.	c	c'	g'	f#+'	f#+'	b+	b+	e'	f#'	f#+	g	b	b	c'	e'	f#'
interv.	trt+	4	6	5	trt+	4-	5-	2+	2!	11-	10+	9!	11	trt^8	9+	9!

Apparently, strictly parallel action of both hands presents no problems in the diatonic and chromatic scales, but even here a few particularities emerge: in diatonic Lydian *trt^8* in place of the eleventh, in diatonic Hyperiastian *trt* in place of the fourth. In chromatic Hypoiastian, as in chromatic Hypolydian, an additional eleventh, a major second and a ninth appear. In chromatic Lydian further changes emerge, the diatonic fourth is replaced by a tritone and an additional ninth appears, but the half-consonances (including the tritone) still prevail.

Admittedly, parallel play in the enharmonic scales is more problematic, but the above example of enharmonic Hypolydian should have shown that even moderate changes in the left hand row can make the system more acceptable. Changes of this type could be extended, until only fixed notes (ἑστῶτες) appear in this part of the left hand row. Furthermore, there are other possibilities: shifted parallel movement (one note to the left in the second row) can produce an accompaniment that is largely consonant or half-consonant, at least in enharmonic Lydian, Hyperphrygian and Hyperiastian. Finally, chains of dissonances (in strictly parallel play) could be resolved by consonant bourdon chords. Altogether, the hypothesis of parallel use makes some sense in the enharmonic case, too.

It must be remarked here that the parallel use of both rows can be extended back to the fourth note in many cases, and sometimes even to the very first note. In the latter case, however, the third interval, the Hypolydian seventh, presents a problem in most scales.[62] This problem can be avoided by playing the second left hand note (*d'*) in place of the third one, but enharmonic Lydian and enharmonic Hyperphrygian remain problematic. Perhaps this is an indication that at least the first three left hand notes were primarily used for

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62   Strictly parallel action of both hands will produce a dissonance in the third column: *b-a'*
      in Hypolydian, Hyperaiolian and diatonic Hyperiastian (a minor seventh), but *bb-a'* in
      Hyperlydian, chromatic Hyperiastian and diatonic as well as chromatic Lydian (a major
      seventh), and even *a+-a'* in enharmonic Lydian and *ab-g+'* in enharmonic Hyperphrygian
      (an octave minus a quarter-tone).

chordal accompaniment. On an instrument strung according to the *hormasia* table, altogether the following methods of left hand accompaniment could be chosen: single bourdon (e.g. *d-d'-a'*), changing bourdons with triplets (e.g. *d-d'*, *d'-a'* and *c'-g'*), chordal accompaniment with triplets (changing chords from step to step), extended accompaniment by chords (beyond triplets), strictly parallel action of both hands (mainly thirds and tenths), shifted parallel action of both hands (various possibilities), partially parallel and partially stationary action of the left hand, free use of both hands—and, last but not least, any mixed selection of these methods.

My suggestions for the lost tables, from diatonic Hyperlydian to enharmonic Hyperiastian, should be understood as a starting point for further discussion and improvement. Perhaps better solutions can be found in future, especially with respect to certain irregularities and the enharmonic scales.

Bibliography

Berthelot, M.M., and Ruelle, Ch.-É. (1887-1888), *Collection des anciens alchemistes grecs*, 1-3. Paris: G. Steinheil (repr. Osnabrück 1967).

Cutler, A. (1984), *The Aristocratic Psalters in Byzantium*. Paris: Picard.

Dräger, H.-H (1962), Psalterium, A. Das Psalterium in Europa und Asien. In: *Die Musik in Geschichte und Gegenwart* 10, pp. 1713-5.

Farmer, H.G. (1931), *Studies in Oriental Musical Instruments*, 1. London: H. Reeves (in particular 3-16, The Mediaeval Psaltery in the Orient, and 53-62, Ninth Century Musical Instruments).

Farmer, H.G. (1976), *Musikgeschichte in Bildern. Band 3: Musik des Mittelalters und der Renaissance, Lieferung 2: Islam*. Leipzig: Deutscher Verlag für Musik.

Hagel, S. (2009), *Ancient Greek Music: A New Technical History*. Cambridge: Cambridge University Press.

Jan, C. (1895), *Musici scriptores Graeci*. Leipzig: Teubner.

Maliaras, N. (2007), *Byzantina Mousika Organa*. Athens: Papagrēgoriou-Nakas.

Manik, L. (1969), *Das arabische Tonsystem im Mittelalter*. Leiden: Brill.

Matranga, P. (1850), *Anecdota Graeca e mss. bibliothecis Vaticana, Angelica, Barberiniana, Vallicelliana, Medicea, Vindobonensi deprompta*. Romae: Bertinelli.

Mersenne, M. (1648)[2], *Harmonica*. Paris: Pierre Ballard.

Najock, D. (1972), *Drei anonyme griechische Traktate über die Musik. Eine kommentierte Neuausgabe des Bellermannschen Anonymus*. Kassel 1972.

Najock, D. (2006), Die Musiklehre des Boethius: Schlußstein der antiken Theorie und Grundstein für das Mittelalter. In: R.F. Glei, ed., *Die Sieben Freien Künste in Antike und Gegenwart*, Trier: Wissenschaftlicher Verlag, pp. 115-40.

Pöhlmann, E. (1970), *Denkmäler altgriechischer Musik*. Nürnberg: H. Carl.

Pöhlmann, E. (2013), Rev. S. Hagel, *Ancient Greek Music: A New Technical History*, Cambridge 2009. *Gnomon* 85, pp. 385-408.

Pöhlmann, E. and West, M.L. (2001), *Documents of ancient Greek music: the extant melodies and fragments*. Oxford: Oxford University Press.

Prickard, A.O. (1961), *Libellus de sublimitate Dionysio Longino fere adscriptus*. Oxonii: Clarendon Press.

Raasted, J. (1983), *The Hagiopolites, A Byzantine Treatise on Musical Theory*. Copenhague: Université de Copenhague.

Ratte, F.J. (1991), *Die Temperatur der Clavierinstrumente*. Kassel/New York: Bärenreiter.

Thurn, I. (1973), *Ioannis Scylitzae Synopsis Historiarum*. Berolini/Novi Eboraci: De Gruyter.

Tsamakda, V. (2002), *The illustrated chronicle of Ioannes Skylitzes in Madrid*. Leiden: Alexandros.

Vincent, A.J.H. (1847), *Notice sur trois manuscrits grecs relatifs à la musique*. Paris: Imprimerie Royale.

Vogt, A. (1935-1939), *Constantin VII Porphyrogénète, Le Livre des Cérémonies*, 1-2. Paris: Les Belles Lettres.

Wellesz, E. (1949), *A History of Byzantine Music and Hymnology*. Oxford: Clarendon Press.

West, M.L. (1992), *Ancient Greek Music*. Oxford: Oxford University Press.

Zarlino, G. (1588), *Sopplimenti Musicali*. Venetia: Francesco de' Franceschi.

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Antistrophes or Antistrophic Couples?
On a Peculiar Use of Antistrophos

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Abstract

On a particular use of the substantive adjective (ἡ) ἀντίστροφος, "piece of the song in response to the strophe", "antistrophe": in some passages of the Aristotelian *corpus* (*Rh.* 1409a27, a 27, b 27, [*Prob.*] 19.15 and 19.30) it is used, generally in the plural, to refer to the whole antistrophic pair, not only to the antistrophe. Such a peculiar use, generally unrecognized, should be integrated into modern dictionaries of Ancient Greek.

Keywords

Greek metrics – antistrophe – rhythm – Greek rhythmics – technical terms – Aristotle

The meaning of the substantive adjective ἀντίστροφος (ἡ, *scil.* ᾠδή) in metrical contexts is undisputed: "piece of song in response to the strophe". This appears quite clearly from a passage of Dionysius of Halicarnassus' *On stylistic composition* (19.84f. Us.-Rad.) quoted by all modern dictionaries of ancient Greek:[1]

> τοῖς δὲ τὰ μέλη γράφουσιν τὸ μὲν τῶν στροφῶν τε καὶ ἀντιστρόφων οὐχ οἷόν τε ἀλλάξαι μέλος, ἀλλ᾽ ἐάν τ᾽ ἐναρμονίους ἐάν τε χρωματικὰς ἐάν τε διατόνους ὑποθῶνται μελῳδίας, ἐν πάσαις δεῖ ταῖς στροφαῖς καὶ ἀντιστρόφοις τὰς αὐτὰς

ἀγωγὰς φυλάττειν. οὐδέ γε τοὺς περιέχοντας ὅλας τὰς στροφὰς ῥυθμοὺς καὶ
τὰς ἀντιστρόφους, ἀλλὰ δεῖ καὶ τούτους τοὺς αὐτοὺς διαμένειν. περὶ δὲ τὰς
καλουμένας ἐπῳδοὺς ἀμφότερα κινεῖν ταῦτα ἔξεστι τό τε μέλος καὶ τὸν ῥυθμόν.
τά τε κῶλα ἐξ ὧν συνέστηκε περίοδος ἐπὶ πολλῆς ἐξουσίας δέδοται [αὐτοῖς]
ποικίλως διαιρεῖν ἄλλοτε ἄλλα μεγέθη καὶ σχήματα αὐτοῖς περιτιθέντας, ἕως
ἂν ἀπαρτίσωσι τὴν στροφήν· ἔπειτα πάλιν δεῖ τὰ αὐτὰ μέτρα καὶ κῶλα ποιεῖν.

The writers of lyric verse cannot vary the melodies of strophe and antis-
trophe, but whether they adopt enharmonic melodies, or chromatic, or
diatonic, in all the strophes and antistrophes the same sequences must
be observed. Nor, again, must the rhythms be changed in which the en-
tire strophes and antistrophes are written, but these too must remain un-
altered. But in the so-called *epodes* both the tune and the rhythm may
be changed. Great freedom, too, is allowed to an author in varying and
elaborating the clauses of which each period is composed by giving them
different lengths and forms in different instances, until they complete a
strophe; but after that, similar metres and clauses must be composed for
the antistrophe.

TRANSL. RHYS ROBERTS

However, it is generally unrecognized that (ἡ) ἀντίστροφος could be used, usu-
ally in the plural, also with reference to the whole couple formed by strophe
and antistrophe. The most evident instance of this meaning comes from the
musical section of the *Problems* attributed to Aristotle, where the fifteenth
question (918b 13-29) reads as follows: διὰ τί οἱ μὲν νόμοι οὐκ ἐν ἀντιστρόφοις
ἐποιοῦντο, αἱ δὲ ἄλλαι ᾠδαὶ αἱ χορικαί; In this context it is difficult to understand
the expression ἐν ἀντιστρόφοις otherwise as "in antistrophic couples" ("for what
reason were the *nomoi* not in antistrophic couples, while the other songs, the
choral ones, were?").[2] In what follows, the plural is more ambiguous in the sen-
tence καὶ οἱ διθύραμβοι, ἐπειδὴ μιμητικοὶ ἐγένοντο, οὐκέτι ἔχουσιν ἀντιστρόφους,

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2   Here is a repertory of the main translations: "Pourquoi les (chants) appelés *nomes* ne sont-ils
    pas disposés *en antistrophes*, tandis que les autres chants employés dans les choeurs le sont?"
    (Ruelle 1891); "Pourquoi les *nomes* n'étaient-ils pas composés *en forme antistrophique*, tandis
    que les autres chants choriques l'étaient?" (D'Eichtal-Reinach 1892), "Warum sind die Nomoi
    nicht *antistrophisch*, während die übrigen Gesänge, die des Chors, es sind?" (Stumpf 1896),
    "Pourquoi les *nomes* n'étaient-ils pas composés autrefois *en antistrophes*, comme les chants
    destinés aux choeurs?" (Gevaert-Vollgraff 1903), "Perché i *nomoi* non erano composti *in forma
    strofica* come gli altri canti corali?" (Marenghi 1957), "Why were *nomoi* not composed *an-
    tistrophically*, while other songs, those for choruses, were?" (Barker 1984), "Perché i *nomoi*
    non venivano disposti *in antistrofe*, mentre lo erano gli altri canti corali?" (Ferrini 2002). It

πρότερον δὲ εἶχον, where it could just mean "antistrophes" or again cover both strophe and antistrophe. The second possibility appears more likely in light of the previous occurrence (see also *Prob.* 19.30, 920a 8-10 διὰ τί οὐδὲ ὑποδωριστὶ οὐδὲ ὑποφρυγιστὶ οὐκ ἔστιν ἐν τραγῳδίᾳ χορικόν; ἢ ὅτι οὐκ ἔχει ἀντίστροφον, ἀλλ᾽ ἀπὸ σκηνῆς· μιμητικὴ γάρ, with an analogous opposition between mimetic free-form and antistrophic form, appropriate for the Chorus).[3] Finally, there is no doubt about the value of the neutral adjective in the penultimate sentence τὸ δ᾽ αὐτὸ αἴτιον καὶ διότι τὰ μὲν ἀπὸ τῆς σκηνῆς οὐκ ἀντίστροφα, τὰ δὲ τοῦ χοροῦ ἀντίστροφα: here the reference is to songs with an antistrophic pattern, made up of strophe and antistrophe. All in all, the substantive form (ἡ) ἀντίστροφος exhibits an extension of its semantic field from a single stanza responding to the strophe ("antistrophe") to the whole pair strophe-antistrophe, with a light slipping certainly due to the close relationship between the two parts and to the logical implication of the first one from the second one (an antistrophe can not exist without a corresponding strophe).[4] Something similar happened with the substantive adjective (ὁ) ἐπῳδός, which generally referred to the second, shorter line of a distichon, but sometimes was used with reference to the whole distichon (cf., e.g., [Plut.] *Mus.* 1141a, Heph. *Poem.* 71.2 Consbr.).

Such an extended meaning of the substantive adjective can be recognized in another passage, coming from the same philosophical and cultural area: the

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is significant that most of the translators felt the need to render ἐν ἀντιστρόφοις adverbially ('antistrophically') or with a periphrasis ('in antistrophic form').

3   See, in particular, the translations of ἀντίστροφον made by Stumpf (1896, 44: "Antistrophie [wörtlich: nicht Antistrophes]"), Gevaert-Vollgraff (1903, 59 "mélopée antistrophique"), Mayhew (2011, 555, "antistrophic [song]"). On the mimetic character of the Hypophrygian and Hypodorian *harmoniai* see esp. [Arist.] *Prob.* 19.48: "both of these are unfitting for a Chorus, but more appropriate to those on the stage. For the latter are imitators of heroes; and in the old days only the leaders were heroes, while the mass of people were mere humans, and it is to these that the Chorus belongs. Hence a mournful and quiet character and melody is suited to them, since these are human [...]. Under the influence of Hypodorian and Hypophrygian, however, we respond with action, something that is not appropriate to a Chorus. For the Chorus is an inactive attendant" (transl. A. Barker). It is not difficult to see behind these words the development of tragedy in the last decades of the fifth century BC (cf. Arist. *Poe.* 1456a25-32), by the time of the later Euripides and his younger contemporary Agathon, both notable exponents of the modernist musical tendency. Hence, there is nothing surprising if the introduction of these two 'monodic' modes into tragedy is ascribed to Agathon, nor if they are associated in some way with dithyrambic and kitharodic music (beside [Arist.] *Prob.* 19.48, see Anon. *Trag.* 5.45-48 Perusino), since the innovations made in these musical forms exerted strong influence on tragedy.

4   This is not striking if one considers that the simple adjective itself assumes the meaning of 'antistrophic', 'with antistrophical structure', as has been observed.

third book of Aristotle's *Rhetoric* (1409a 24-b 32). Here the philosopher draws a distinction between two different prose styles, the free-running one (εἰρομένη λέξις), with its parts united by nothing except the connecting words, and the compact one (κατεστραμμένη λέξις), made up of periods or sentences of similar length. The first style is compared to the astrophic preludes of the 'new' dithyramb of Melanippides of Melos and other innovative composers of the second half of the 5th century BC, while the second one is equated with the antistrophic structure of the older composers, such as Stesichorus, Simonides and Pindar (*Rh.* 1409a 24-27 τὴν δὲ λέξιν ἀνάγκη εἶναι ἢ εἰρομένην καὶ τῷ συνδέσμῳ μίαν, ὥσπερ αἱ ἐν τοῖς διθυράμβοις ἀναβολαί, ἢ κατεστραμμένην καὶ ὁμοίαν ταῖς τῶν ἀρχαίων ποιητῶν ἀντιστρόφοις). The context makes it clear that the dative ταῖς ἀντιστρόφοις refers to both strophe and antistrophe, which correspond, on a metrical level, to the periods of prose: for Aristotle, antistrophic and periodic patterns are based on the same principle of balance or proportion, ἀριθμός, which can not be overlooked by (music- or prose-)composers, otherwise the style runs the risk of changing into its opposite.[5] He illustrates this point with an instructive image at *Rh.* 1409b 17-32:

> δεῖ δὲ καὶ τὰ κῶλα καὶ τὰς περιόδους μήτε μυούρους εἶναι μήτε μακράς. τὸ μὲν γὰρ μικρὸν προσπταίειν πολλάκις ποιεῖ τὸν ἀκροατήν (ἀνάγκη γὰρ ὅταν, ἔτι ὁρμῶν ἐπὶ τὸ πόρρω καὶ τὸ μέτρον οὗ ἔχει ἐν ἑαυτῷ ὅρον, ἀντισπασθῇ παυσαμένου, οἷον πρόσπταισιν γίγνεσθαι διὰ τὴν ἀντίκρουσιν)· τὰ δὲ μακρὰ ἀπολείπεσθαι ποιεῖ, ὥσπερ οἱ ἐξωτέρω ἀποκάμπτοντες τοῦ τέρματος· ἀπολείπουσι γὰρ καὶ οὗτοι τοὺς συμπεριπατοῦντας, ὁμοίως δὲ καὶ αἱ περίοδοι αἱ μακραὶ οὖσαι λόγος γίνεται καὶ ἀναβολῇ ὅμοιον, ὥστε γίνεται ὃ ἔσκωψεν Δημόκριτος ὁ Χῖος εἰς Μελανιππίδην ποιήσαντα ἀντὶ τῶν ἀντιστρόφων ἀναβολάς· "οἷ τ᾽ αὐτῷ κακὰ τεύχει ἀνὴρ ἄλλῳ κακὰ τεύχων, / ἡ δὲ μακρὰ ἀναβολὴ τῷ ποιήσαντι κακίστη". ἁρμόττει γὰρ τὸ τοιοῦτον καὶ εἰς τὰς μακροκώλους λέγειν. αἵ τε λίαν βραχύκωλοι οὐ περίοδος γίνεται· προπετῆ οὖν ἄγει τὸν ἀκροατήν.

The members, and the whole periods, should be neither curt nor long. A member which is too short often makes the listener stumble (he is still expecting the rhythm to go on to the limit his mind has fixed for it; and if meanwhile he is pulled back by the speaker's stopping, the shock is bound to make him, so to speak, stumble). If, on the other hand, you go on too

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5 Cf. *Rh.* 1408b 28-30 περαίνεται δὲ ἀριθμῷ πάντα· ὁ δὲ τοῦ σχήματος τῆς λέξεως <u>ἀριθμὸς</u> ῥυθμός ἐστιν, οὗ καὶ τὰ μέτρα τμήματα· διὸ ῥυθμὸν δεῖ ἔχειν τὸν λόγον, μέτρον δὲ μή. For music see also *Prob.* 19,15 (918b 25f.) ἡ δὲ ἀντίστροφος ἁπλοῦν· <u>ἀριθμὸς</u> γάρ ἐστι καὶ ἑνὶ μετρεῖται. On the principle of proportion in Aristotle's *Rhetoric* cf. Fowler 1982, 92.

long, you make him feel left behind, just as people who when walking
pass beyond the boundary before turning back leave their companions
behind. So too if a period is too long you turn it into a speech, or some-
thing like a dithyrambic prelude. The result is much like the preludes
that Democritus of Chios jeered at Melanippides for writing instead of
antistrophic stanzas: "He that sets traps for another man's feet / Is like to
fall into them first; / And long-winded preludes do harm to us all, / But
the preluder catches it worst". Which applies likewise to long-membered
orators. Periods whose members are altogether too short are not periods
at all; and the result is to bring the hearer down with a crash.

<div style="margin-left:2em">TRANSL. RHYS ROBERTS</div>

The metaphor of the walkers going past the expected turning point makes it
clear that rhetorical and metrical periods (and *cola*) should not exceed an av-
erage-length and not be too long or too short in comparison with the others: if
they go beyond the expected measure, they can be no more perceived by the
audience as periods (or *cola*). This is exactly what Melanippides did in his dith-
yrambs, as is implied by the sentence ὁμοίως δὲ καὶ αἱ περίοδοι αἱ μακραὶ οὖσαι
λόγος γίνεται καὶ ἀναβολῇ ὅμοιον: by extending the strophe over the expected
limit, he violated the principle of proportion and abolished any possibility of
a corresponding stanza (antistrophe). The ratio can be represented as follows:
'long rhetorical περίοδοι : λόγος = long ἀντίστροφοι : ἀναβολή'. In other words,
"composing *anabolai* instead of *antistrophoi*" (ποιήσαντα ἀντὶ τῶν ἀντιστρόφων
ἀναβολάς) refers to the substitution of antistrophic couples with an extended
through-composed prelude.

The passage was interpreted in the same way by Comotti (1989, 114), who, however, took
ἀντιστρόφων as referring to "carmi antistrofici" (ἀντίστροφα ᾄσματα?), which would imply dithy-
rambs totally through-composed—note, however, that this is not what the scholar intended:
"dalle parole di Democrito non sembra che egli rimproverasse a Melanippide l'introduzione di
un nuovo elemento, l'*anabolé* appunto, nel canto ditirambico, o la sua sostituzione integrale al
canto corale, ma soltanto l'eccessivo sviluppo dell'*anabolé* nelle sue composizioni a danno del
canto antistrofico". The problem is easily solved if one takes ἀντιστρόφων to refer to antistrophic
couples. For a different interpretation see West (1992, 357f.): "as a musical term, *anabole* usu-
ally signifies an instrumental preface to a vocal performance. If it replaces an antistrophe, it
becomes an intermezzo; and a dithyramb deprived of antistrophes is presumably one without
responsion, through-composed, consisting of a series of sung sections punctuated by passages
for aulos alone". It is however difficult to see how such a replacement of an antistrophe with a
musical intermezzo could fit the metaphor of the walkers, particularly if we consider that the
rhetorical tradition generally identified metrical periods (περίοδοι) with strophes, antistrophes

and other similar stanzas (cf., e.g., Dion. Hal. *Dem.* 50,54; see Pace 2002, 33s. and Andreatta 2008, 48s.).

If the above discussion holds, an adequate presentation of the metrical meaning of ἀντίστροφος could be as follows: "(in lyrics) antistrophic, [Arist.] *Prob.* 19.15 (918b 27), etc. | Subst. ἀντίστροφος (*scil.* ᾠδή), ἡ, antistrophe, [Arist.] *Prob.* 19.15 (918b 25), Dion. Hal. *Comp.* 19, Heph. *Sign.* p. 74.1f. Consbr., Hermog. *Id.* 1.11.273, Poll. 4.53, Mar. Vict. *GL* 6.58.18 Keil, *schol. vet.* Ar. *Nu.* 595e Holwerda, etc.; (generally plur.) antistrophic pair, Arist. *Rh.* 1409a 27, b 27, [Arist.] *Prob.* 19.15 (918b 13, 19f.), 19.30 (920a 9)".

Bibliography

Andreatta, L. (2008). «[Haud] integros accedere fontis». Testimonianze sparse sui carmi κατὰ σχέσιν. *Paideia* 63, pp. 29-63.

Barker, A. (1984). *Greek Musical Writings*, 1: *The Musician and his Art*. Cambridge: Cambridge University Press.

Comotti, G. (1989). L'*anabolé* e il ditirambo. *QUCC* n.s. 31, pp. 107-17.

D'Eichtal, E., and Reinach, T. (1892). Notes sur les *Problèmes musicaux* dits d'Aristote. *REG* 5, pp. 22-52.

Ferrini, M.F. (2002). *Aristotele. Problemi*. Milano: Bompiani.

Fowler, R.L. (1982). Aristotle on the Period (*Rhet.* 3.9). *CQ* n.s. 32, pp. 89-99.

Gevaert, F.A., and Vollgraff, J.C. (1903). *Les problèmes musicaux d'Aristote*. Gand: Librairie général de Ad. Hoste.

Marenghi, G. (1957). *Aristotele. Problemi musicali*. Firenze: Sansoni.

Mayhew, R. (2011). *Aristotle. Problems*, 1, *Books 1-19*. Cambridge, Mass./London: Harvard University Press.

Pace, G. (2002). Il termine περίοδος nella dottrina metrica e ritmica antica. *QUCC* n.s. 71, pp. 25-46.

Ruelle, C.-É. (1891). Problèmes musicaux d'Aristote. *REG* 4, pp. 233-67.

Stumpf, C. (1896). Die pseudo-aristotelischen Probleme über Musik. *Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin* 3, pp. 1-85.

West, M.L. (1992). *Ancient Greeek Music*. Oxford: Oxford University Press.

BRILL

Classical Metre and Modern Music

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Abstract

This article explores the influence of Greek metre on modern music. It begins by looking at how composers and theorists debated Greek metre from the seventeenth to the nineteenth century, before focusing more extensively on twentieth century and contemporary material. The article seeks to show that Greek metre for a long time played an important role in the development of Western music theory, but that in more recent times its influence has diminished. One significant development discussed is the influence of Greek metrics on musical Modernism in the early twentieth century. The article is intended as a contribution to our understanding of the reception of ancient metrics in connection with musical developments.

Keywords

Introduction

The rediscovery of the function and importance of Greek metre among Byzantine scholars brought about renewed awareness of the relationship between music and metre in classical Greek texts. When this knowledge was transmitted from Byzantium to Italy, it was thought that the ancient unity of music and metre by means of rhythm could be revived. Thus numerous composers attempted to depict ancient metres in their music, while a few performers, such as Lippo Brandolini, improvised songs in verses dictated by the principles of ancient metrics. By the end of the sixteenth century, the ancient

metres had had a prominent, if specialised, role in the rejuvenation of music through classical forms. This is not the place to retrace the remarkable revival of ancient metre in the Renaissance or to reconsider the historical circumstances out of which it emerged.[1] This article will be concerned with the relationship between ancient metre and music after the Renaissance, concentrating in particular on the period from the nineteenth to the twenty-first century. The focus of the article will be music composed and performed according to Greek and Roman metre, though the role of the classical metres in the history of Western music theory will also be considered. For reasons of space, I have decided to limit the discussion to German and French material, since Italian material in many ways deserves a treatment of its own.

1   Classical Metre in the Seventeenth and Eighteenth Centuries

There is little evidence for the use of ancient metre by musical composers in the seventeenth and eighteenth centuries. Scholars continued to debate how Greek and Latin metres might best be represented in music, but this information does not seem to have been applied in practice. A recent study of metre in music from 1600 to 1800 has shown how, in general, there was a decline in the use of *rhythmopoeia* (the direct translation of the Greek and Latin metres into musical phrases which was common in the Renaissance) in this period, because composers became more interested in accent within musical measures.[2] Nevertheless, scholars continued to argue about the function of metre and its relationship with music. The French scholar Marin Mersenne (1588-1648) believed that ancient poetic rhythm conveyed specific images of passion and affection; for instance, the swift movement of dactyls could, according to Mersenne, disturb the mind, blood, or humours of any hearer or reader, whereas slow spondees might evoke sadness and depression; moreover, metre was used to express movements—fast syllables quick movement, slow syllables slow movements.[3] Mersenne's study of emotions and movements which

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1   On classical metre and Renaissance music, see Panegyres 2016; on Byzantine scholarship, the classics, and the Italian Renaissance, see Wilson 1992; Witt 2000; on the knowledge of ancient music theory in the Renaissance, see Gallo 1989. I wish to thank Prof. Donatella Restani and Prof. Kerry Murphy for comments on an earlier draft of this article.

2   Houle 1987, 62-77.

3   Mersenne 1636, 374: "La Rhythmique est un Art qui considere les mouuemens, & qui regle leur suite & leur mélange pour exciter les passions, & pour les entretenir, ou pour les augmenter, diminuer, ou appaiser". The notion that rhythm can represent bodily movement and

are supposedly represented by metre was published in 1636 in his *Harmonie Universelle*; the work aimed to counter the prevalent opinion of the time, namely that poetic feet were derived from Pythagorean ratios.[4] Following in the tradition of Jean-Antoine de Baïf and Charles de Navieres, he applied the principles of Greek metre to the French language in the attempt to connect it to the poetry and music of Greek, Latin, and Hebrew.[5]

Some years later, Athanasius Kircher (1602-1680) published *Musurgia Uniuersalis* (1650),[6] in one chapter of which he provided a compendium of musical equivalents for ancient Greek and Latin metres.[7] At the start of this chapter, there is a table entitled *pedes poetici correspondentes pedibus harmonicis*, which serves as a guide, presumably aimed both at musicians and at theorists, for understanding how metrical feet correspond to musical lengths. In the pages that follow, Kircher discusses at considerable length the various ways in which poetry can be analysed through metre and, in turn, worked into small musical compositions. It is worth noting that, in Kircher's conception, study of the ancient metres and their musical equivalents appears to be the necessary background for understanding musical rhythm, for it is only after outlining the ancient metres that Kircher turns to the substance of his theory of *Musarithmus*, the notion that a syllable corresponds to a musical note. In this section, Kircher provides the computational principles upon which anyone (even non-musicians) could potentially compose musical settings for texts in every kind of poetic metre, using his invention, the *arca musurgica*.[8] It is difficult to gauge the extent to which this discussion of music and metre influenced the practices of musicians and composers in the seventeenth century, but the fact that the *Musurgia Uniuersalis* was one of the most widely disseminated works of musical theory in the seventeenth century suggests that its impact on contemporary ideas about music and metre may have been very great.[9]

Kircher's *Musurgia Uniuersalis* stands out in the history of the relationship between music and ancient metre. It is now, however, appropriate to outline,

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emotion is resurrected most recently in David (2006), who discusses the relevant ancient *testimonia* (mainly from Plato) and considers their implications; he does not mention any of the substantial Renaissance scholarship on this problem, though his work falls in the same tradition and clearly echoes some Renaissance scholars' ideas.

4   Mace 1997, 724.

5   Mersenne 1636, 377: "& [afin] que l'on se souuienne des mots Hebrieux, Grecs, ou Latins, d'où nos dictions Françoise sont deriuée, & qu'elles rendent hommage à leurs auteurs".

6   For background on this work see Scharlau 1969; Pangrazi 2009; McKay 2012.

7   Kircher 1640, ii. 30-70.

8   McKay (2012, *passim*) discusses the *arca musurgica* in detail.

9   Fletcher 1968; Fletcher 2011, esp. 88-104; McKay 2012.

in briefer terms, the most important developments in the seventeenth and eighteenth century in the study of ancient metre and music, for the ground has already been reasonably well covered.[10] One central figure was Isaac Vossius (1618-1689), who was a Dutch scholar and a leading intellectual in seventeenth century Europe.[11] In *De poematum cantu et uiribus rhythmi* (1673), Vossius classified Greek poetic metres and applied them to musical rhythms. In the intellectual tradition of Galileo and Mersenne, Vossius considered that the various ancient metres were intended to represent different kinds of emotion, and believed that the power of Greek and Roman music was founded on the combination of such metres to produce strong emotional effects in a listener. He argued, for instance, that the iamb is "vehement and angry" (*uehemens & iracundus est iambus*) and that the trochee expresses those things which are "soft and delicate" (*quae mollia & tenera sunt exhibebit trochaeus*).[12] He concluded his point by suggesting that ancient music was successful so long as its metres could continue to excite the emotions of listeners: "This (i.e. metre) was the principle, this was the manner, this finally was the beauty and form of the ancient music of the Greeks and Romans, and for as long as these (i.e. different kinds of metre) flourished, for so long also did that virtue (i.e. music) suited to exciting and calming the emotions flourish".[13] The work of Vossius was followed by a number of prominent publications in music theory which also relied on ancient metrical theory. In *Phrynidis Mytilenaei Oder des Satyrischen Componisten* (1696), Wolfgang Caspar Printz (1641-1717) argued that there were six basic rhythmic patterns, which he broadly based on Greek metrical terminology: *iambus*, *trochaeus*, *enantius* (or *contrarius*), *dactylus*, *nothrus* (or

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10   Houle (1987) is useful, but contains many inexplicable errors in its quotation of Latin; Caplin (2008) is the most reliable outline.

11   To give a sense of the knowledge Vossius had of ancient music, it is worth pointing out that his library contained an MS of Aristoxenus (now in the Leiden University Library) as well as *diuersi tractatus* on *musica antiqua*: see Balsem 2012, 299. Cf. Bianconi 1987, 56 (on Vossius) and *passim*.

12   Vossius 1673, 73.

13   Vossius 1673, 75: *haec ratio, hic modus, haec denique antiquae musicae apud Graecos & Romanos forma fuit & figura, eaque quamdiu floruit, tamdiu floruit etiam uirtus illa excitandis & sopiendis apta affectibus.* As the foundation of this theory, Vossius claimed that any poem which cannot be sung is no poem, because, from the earliest times, there was nothing but poetry and poems. Vossius 1673, 1-2, *Si itaque primitiuam uocabuli acceptionem spectemus, poësis uel poëma nihil aliud fuerit, quam qualiscunque compositio cantui apta. Unde sequitur, quicquid non canitur aut cantari nequeat, non esse poëma.* On the background to Vossius' notion of metre, such as its relation to Cicero and Quintilian, see Plantade 2007.

spondaeus), and *syncopaticus*, each of which also had internal variations in durational value. Printz's theory allowed only for limited musical expression, and probably did not have influence beyond theory.[14] With *Der volkommene Capellmeister* (1739), Johann Mattheson (1681-1764) adhered to Vossius' notion that the metres represented specific emotions, and he determined which metre corresponds to what emotion by reference to the authority of classical authors.[15] Like Printz, Mattheson based his approach to musical rhythm on Greek and Roman poetic metres. However, Mattheson's work shows numerous shortcomings in his understanding of ancient metrical terminology, making his conclusions seem suspect.[16] Later, Jean-Jaques Rousseau (1712-1778) in his *Dictionnaire de musique* (1768) questioned the association between certain emotions and metres which had been made by Vossius, suggesting that there is no clear principle upon which one can determine the emotion a metre (or rhythm) is intended to convey, and pointing out the difficulties involved in discovering the individual character of the passions.[17] From this point on, *rhythmopoeia* decreased in significance as scholars increasingly based their conclusions on enlightenment rationalism rather than on the authority of classical authors,[18] with the result that discussions of the ancient metres and their relationship with music were now treated with some skepticism.[19]

Despite the amount of interest shown in the topic of ancient metre and music by leading intellectuals of the seventeenth and eighteenth centuries,[20] this interest does not appear to have been translated into practical uses of ancient metre in contemporary musical compositions. While it is plausible that, say, Kircher's method of composing music according to ancient

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14   See Caplin 2008, 666.

15   Mattheson 1739, 210-34.

16   Cf. Seidel 1975, 42-51; Caplin 2008, 664.

17   Rousseau 1768, 147-9. It has been claimed that, in general, Rousseau's *Dictionnaire de musique* had radical aims, namely to critique the foundations of previous musical thought: see Verba 1989.

18   Rousseau 1768, 147-9; Hiller 1774, 190f.

19   See, e.g., Callcott 1806, 241: "It has been usual with some Authors to apply the names of the ancient poetical Feet to corresponding musical passages; but the difference between ancient and modern Quantity and Accent, leaves a doubt concerning the propriety of using the terms of Grecian Rhythm". Cf. the encyclopedic entry in Wilkes 1819, 341, where Callcott's discussion is repeated without due reference and with apparent authority; this possibly suggests that it had become a common opinion among English-speaking scholars.

20   For a useful list of scholarship on ancient music in the seventeenth and eighteenth centuries, see Damschroder and Williams 1990, 459-65.

metrical principles could have been used by many people, both professional and amateur musicians, there is unfortunately no surviving evidence for this. At the same time, however, it would be incorrect to claim that the theorists of the seventeenth and eighteenth centuries were entirely uninterested by the practical application of ancient metres in music. It is clear that some of their simplifications and systematizations of ancient metre according to contemporary musical theory were motivated to some extent by the desire to expand and explain the theory and practice of music; but in other cases their discussions of the classical metres obscure rather than clarify. Whether or not their work was fulfilled in performance is another matter. Texts written in Latin, such as those by Kircher and Vossius, would no doubt have been restricted to a limited audience, while the vernacular of Printz, Mattheson, and Rousseau, may well have reached a wider, non-specialist audience. It is only possible to speculate about whether amateur musicians digested this material on ancient metre and used it to produce their own music; the musical phrases composed by the theoreticians might better be regarded as technical 'exercises' rather than artistic 'compositions' intended for performance. By way of contrast, one can note that in the Renaissance a number of leading composers wrote music according to the classical poetic metres which was meant for public performance.[21]

2 Classical Metre and Nineteenth-Century Music

While the influence of classical metre on music composed for performance constantly changed between the fifteenth and the nineteenth century, it never ceased to pique the interest of music theorists. At the outset of the nineteenth century, some theorists began to apply their ideas about classical metre to the leading composers of the day. This movement was, however, isolated, but one main example is worth pointing out. The intellectual background to Beethoven's universally acknowledged fascination with rhythm was a dispute over the role of rhythm in music based on classical metrics. In 1795, Christian Gottfried Körner, a composer, jurist, and the first to compose an *Ode to Joy*, published a treatise arguing that ἦθος was defined above all by rhythm, the underlying units of measure in a piece of music which Mattheson called *der Klangfuß* or 'musical foot' and was the equivalent of poetic metres.[22] This treatise appealed to the prominent and successful function of rhythm in Greek music, poetry,

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21   See Panegyres 2016.

22   Körner 1795 = Seifert 1960, 147-58. On *der Klangfuß*, which appeared consistently in the
      eighteenth century as a feature of music theory and used classical metrical terminology

and dance, intimating that a return to the Greek function of rhythm might improve German music.[23] Though Körner admitted the lack of knowledge of Greek music in the late eighteenth century, he nevertheless claimed that the metres found in poetry were representative of the highest form of art which, in every way, ought to be revived by Germans.[24] This sentiment was echoed by important figures in Germany around that time, such as Hegel, who saw in metre a fixed element in the musical ebb and flow of emotions,[25] and Schiller, who, by contrast, argued that music's capacity to corrupt an individual emotionally, particularly through intoxicating metres, made it morally suspect.[26] In Schindler's reminiscences of Beethoven, we find intriguing discussions of the relevance of Platonic philosophy to Beethoven's music, including certain references to the emotional effects of Greek metre and its rhythms,[27] and Schindler claims that Beethoven had 'respect' for these classical ideas about music.[28] It is difficult to measure the precise extent to which a composer might have written music with specific theories in mind, but it seems fairly certain that Beethoven was personally engaged in contemporary debates about rhythm which were based around the classical poetic metres.

It is in Felix Mendelssohn's incidental music for *Antigone*, performed at the Prussian court theatre in Potsdam in October 1841, that we find the first major attempt to set Greek metre to music intended for public performance since the Renaissance. The translation chosen as the basis of the music was by Johann Jakob Donner; in place of the long and short syllables of the Greek, Donner in

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(e.g., *iambus*, *trochaeus*), cf. Spieß 1745, 108ff.; Marpurg 1758, 31; Wiehmayer 1797, 28ff. For background on Körner, see De Ruiter 1989, 127-204.

23   Körner 1795: "Daher der hohe Werth des Rhythmus in der griechischen Musik, Poesie, und Tanzkunst. Das ruhige Fortschreiten der Würde, und das Schweben der Anmuth haben diese Künste mit einander gemein. 'Das Wortlose' sagt Klopstock 'wandelt in einem guten Gedicht umher, wie in Homers Schlachten die nur von wenigen gesehen Götter'".

24   Körner 1795: "Über die Melodie der Griechen haben wir nur dunkle und unvollständige Nachrichten, aber was sie im Rhythmus leisteten, können wir schon an dem einzigen Beyspiele zweyer Versarten erkennen: den Alcäischen, und den Sapphischen. Jene ist eine musterhafte Darstellung des männlichen, diese des weiblichen Ideals. Der Deutsche— der es aber bedarf von Zeit zu Zeit an seine Schätze erinnert zu werden—braucht solche Muster so weit nicht zu suchen".

25   Hegel 1965 (ed. Bassenge), ii. 284-6; Dahlhaus 1991, 55.

26   Schiller 1795; Dahlhaus 1991, 132.

27   Schindler 1996 [1860], 114.

28   Schindler 1996 [1860], 115. Unfortunately, Schindler is unspecific.

German used accented and unaccented syllables.[29] This followed a common trend in the nineteenth century, namely to translate Greek into German but retain, so far as possible, the metre of the ancient language.[30] Mendelssohn desired that the choruses be sung or spoken in unison in recitative, accompanied by flutes, tubas, and harps, but later aborted his plan because it failed to work musically.[31] Instead, he altered the rhythm of the vocal line to correspond to Sophocles' metre, though he did so inconsistently.[32] As Böckh records, Mendelssohn set the anapaests of the *parodos* as recitative for the chorus but as arias for the chorus leader, following, it is said, the views of the most respected philologists of his time.[33] Mendelssohn's attempt to depict the metre of *Antigone* was criticized by Wagner for its overtly philological approach;[34] in truth, however, Mendelssohn's work succeeded in that it re-inspired composers to shape music according to the classical poetic metres, not only, as in Mendelssohn's case, when a piece of music was written for a classical topic, but also for entirely original compositions.

From this point on, there was renewed interest in the adaptability of ancient music theory to contemporary music among leading scholars and composers. In Germany, Richard Wagner, inspired by the tragedies of Aeschylus,[35] realized the artistic significance of combining drama, theatre, and music into a single *Gesamtkunstwerk*;[36] in France, the classicist Louis Havet suggested that the unity of poetry and music which (it was thought) had been achieved in Greek literature could have important practical applications for contemporary musicians;[37] in Belgium, François-Auguste Gevaert indicated that the works of ancient music theorists could provide a new way forward for the future;[38] and, more broadly, scholars such as C.F. Abdy Williams, J.H.H. Schmidt,

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29   Geary 2006, 188. On the influence of ancient Greece on German Romantic music more generally, see Geary 2014.

30   Geary 2006, 209; cf. Stoneman 1999.

31   Devrient 1869, 218-19.

32   Geary 2006, 214-15.

33   Böckh 1842, 93; cf. Geary 2006, 214-15 for analysis of the score.

34   Wagner 1871-83, iv: 29.

35   Ewans 1982, 15; Foster 2010; Lloyd-Jones 1982, 128-30.

36   Ewans 1982, 17.

37   E.g., Havet and Reinach 1894.

38   Gevaert 1875.

J.W. White, R. Westphal and A. Roßbach began to analyze compositions by
Bach, Beethoven, and Mozart according to ancient metrical theory.[39]

    After Mendelssohn, another use of classical metres was thought to have
been made by Richard Wagner in *Tristan und Isolde* (1859): from his youth,
Wagner had been fascinated by the ways in which the Greek dramatists used
rhythm.[40] Nietzsche considered that Wagner's use of rhythm as *Zeitfolge* con-
firmed a connection to Greek drama.[41] Influenced by his studies of Westphal's
scholarship on Greek rhythm and metre, Nietzsche believed that the Greek use
of *Zeit-Rhythmik* (as opposed to *Affekt-Rhythmik*) survived in Wagner's operas:[42]
he wrote of the possibilities of a "Neue Theorie der Rhythmik. Neue Aesthetik.
Homer und die Tragoedie. Neue Culturabschätzung. Neue Sprachphilosophie.
Neue Form zu finden".[43] This could be achieved by pursuing the Wagnerian
concept of rhythm.[44] On hearing and analyzing Wagner's *Tristan und Isolde*
(3rd act, 2nd scene), Nietzsche considered that Wagner had introduced a
Greek rhythm into his opera, the paeonic.[45] Nietzsche also made a comparison
between the rhythmic schemes of Wagner's *Tristan* and a Beethoven sonata,[46]
and then provided a full metrical analysis of *Tristan* Act III Scene II according
to the principles of Greek metre.[47] Whether or not Wagner himself intended
to introduce the paeonic or cretic rhythm into *Tristan* is less obvious,[48] but in
his writings Wagner displays knowledge of and interest in Greek metre and
rhythm and places it in the context of new directions in German language and
music.[49]

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39   Williams 1893; Westphal and Roßbach 1867-8; Westphal 1872; Westphal, Gleditsch, and
      Roßbach 1885-89. On Schmidt and White, see Parker 1997, 115.

40   Ewans 1982, 15.

41   See esp. Corbier 2009; cf. Prange 2013, 123.

42   Nietzsche to Carl Fuchs August 1888, KGB III 3, no. 1097, 403.

43   KGW III 3, 8 [52], 252.

44   Corbier 2009, 29.

45   KGW II 3, 109.

46   KGW II 3, 115.

47   KGW II 3, 201.

48   See Corbier 2009, 38.

49   See Wagner 1871-83, ix, 256; cf. vii, 106: "Bei den Griechen kennen wir die Musik als
      Begleitung des Tanzes; die Bewegung des Tanzes gab ihr, wie dem Sänger zur Tanzweise
      gesungenen Gedichte, die Gesetze des Rhythmus, welche Vers und Melodie so entsch-
      ieden bestimmten, daß die griechische Musik (unter welcher die Poesie fast immer mit
      verstanden war) nur als der in Tönen und Worten sich immer sprechende Tanz angesehen
      werden kann …".

3   Classical Metre in the Late Nineteenth and Twentieth Century

It should be unsurprising that most of the composers discussed so far happened to be both classical scholars and musicians. This trend continued, more or less, with the advent of modernism in music. Increasingly, composers began to turn to Greek and Roman themes not only for inspiration regarding the topics of their music, but also for original forms of rhythm and melody–a means of escaping, so to speak, the limitations of traditional music theory. At the same time, one should be aware that composers' uses of classical poetic metres became more intricately interwoven in their music, sometimes, for instance, hidden behind melodies or dispersed throughout different instrumental parts, and would not have been immediately obvious to an audience without background information or the aid of a programme. This is contrary to the way in which Renaissance composers incorporated classical metres, which was generally clear with each instrumental or vocal part being performed in unison.[50]

I will begin with Maurice Emmanuel (1862-1938).[51] Emmanuel studied music and musicology at the Paris Conservatoire; there he learnt composition with Delibes (by whom he was unfairly hated and dismissed from class), attended the classes of Franck, and befriended his fellow student Debussy. In 1889 and 1890 Emmanuel had the fortune of meeting Gevaert, the great Belgian musicologist, and this event changed the direction of his musical interests in favour of ancient music. At this time, he enrolled in lectures at the Sorbonne and the Louvre on Greek and Latin metres given by Louis Havet.[52] In 1895 he submitted two theses for his doctorate: *Essai sur l'orchestique grecque* and *De saltationis disciplina apud Graecos*. Intending to pursue an academic career, in 1896 he published his doctorate under the title *La Danse grecque antique d'après les monuments figurés*. This was the product of extensive study, and Emmanuel spent many days in the Louvre examining ancient vases and comparing representations of dance with all the references to dancing he could find in the plays of the Attic dramatists. In the same year he was commissioned to write an article on ancient music for the Lavignac Encyclopaedia; and in August 1926 he gave an address at an international "Congress on Rhythm" held at Geneva.[53] (A publication entitled *The Creation of the Violin and Its Consequences* reveals the author's interest in ancient modes by discussion of Pythagorean harmonic

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50   Cf. Panegyres 2016.

51   The obituary in Stewart (1939) is useful for more basic information.

52   See Stevenson 1959, 154-65.

53   Stevenson 1959, 159.

modulations).[54] He also conducted research on the inscriptions of the Delphic Hymns and the Hymn to Helios discovered at Delphi by the French School in Athens; from these investigations he became convinced that the music of the ancient Greeks was the work of masters and contained harmonies which perhaps could not be fully understood by investigation of the notation alone.[55]

Emmanuel's works on music were among a number of French publications on the topic of ancient Greek music and metre. Other notable treatises were Alfred Croiset's *La Poésie de Pindare et les lois du lyrisme grec* (1880) and Jules Combarieu's *Théorie du rhythme dans la composition moderne, d'après la doctrine antique* (1897). These were preceded and probably inspired by François-Auguste Gevaert's enormous treatise on ancient music, the *Histoire et théorie de la Musique de l'antiquité* (1875). An important point can be gleaned merely by observing the titles of these works and the words *lois*, *théorie*, and *doctrine*: they are studies meant not only for historical interest, but also for theoretical understanding and even compositional application. Emmanuel's work *La Danse grecque* in particular offers detailed information on how one might reconstruct ancient dance and its rhythms, and it builds its conclusions carefully not only on some literary evidence but also (mainly) on artistic evidence, covering a period from Mycenaean times to the first century BC.[56] The work is furthermore full of wonderful drawings, evidently based on artwork, which are analyzed and categorized by Emmanuel. At one point, for instance, he explains a dance in which the dancer must cross one leg over the other with two hands raised over the head whilst in mid air: this he calls a 'strange figure'.[57] At another point, he provides detailed explanations about the exercises a dancer can do to prepare and improve.[58] Yet further sections describe the way in which choruses interact with rhythm or the gestures appropriate for funerals.[59] In sum, Emmanuel's treatise on Greek dance provides the necessary information not only for learning about ancient Greek dance and dance metres, but also offers all the evidence required for anyone who might wish to fully reproduce Greek dance in a most complete way.

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54   Emmanuel 1937, 515.

55   Stevenson 1959, 160. In his obituary Stevenson, not himself a classicist, refers to the 'papyri' of the Delphic Hymns and Hymn to Helios, but this is clearly a mistake, since these works were preserved on inscriptions, not papyri. See West 1992, 279 nn. 12-13, 280 n. 18.

56   The summary of the work is helpful in this regard; see Emmanuel 1896, ix–xii.

57   Emmanuel 1896, 213.

58   Emmanuel 1896, 221-30.

59   Emmanuel 1896, 249-67, 267-71.

Emmanuel was not merely an historian of ancient music. His detailed scholarship on the reconstruction of dance can be explained if it is understood that he was also a composer and performer actively interested in incorporating Greek culture into his own music. He wrote a number of compositions based on ancient Greek and Roman plays or poetry. He produced two operas based on Aeschylus, *Prométhéé enchaîné* (written 1916-18), *Salamine* (1923-28), based on Aeschylus' *Persae*, and one on Plautus' *Amphitryon* (1936); in addition he wrote two works on Greek poetry and musical themes, *Suite sur des airs populaires grecs* for violin and piano (1907) and *Trois odelettes anacréontiques* for voice, flute, and piano (1911); finally, he also wrote *O filii* for choir, based on Gregorian plainchant (1907). In some of these works, particularly the operas, Emmanuel attempts to reconstruct the Greek metre. In the first chorus of *Salamine*, for instance, he renders the ionic metron as two quavers followed by two crotchets. Aeschylus maintains the ionic for four strophic couplets, but Emmanuel, deciding this was too much for modern ears, added bassoon counterpoint to the second strophe. To make his principles of imitation clear, he laid out his theory of metre in the preface to the work, which was first performed at the Opéra in the 1929-30 season:[60]

> It would be absurd and, moreover, impossible to try to imitate the music of ancient Greece. [...] But we know for certain some essential principles of the Greek art which are transportable into our musical system, without losing anything of their validity; the variety of expression obtained by the variety of modes; the employment of rhythmic patterns of a simply figuration. The frequency of rhythmic changes or modulations; the association of lyric strophes with couplets. [...] Such procedures are independent of musical law proper and are universally applicable to the popular art of all nations.

Aside from the ambition to use metre in modern music, there was another programme in *Salamine*. The libretto, based on a translation from the Greek, was by Théodore Reinach, also a Hellenist. Reinach and Emmanuel had a philosophical agenda to offer an image of Greek drama which differed from the one which had been represented by Wagner and Nietzsche. In August 1928, for instance, Reinach wrote in a private letter to Emmanuel:

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60 Text translated in Stevenson 1959, 160. Some of these arguments about the difficulty of accurately depicting ancient Greek music are paralleled in West 2013.

> J'estime au contraire que la forme du drame lyrique Gluck-Meyerbeer-Wagner chanté d'un bout à l'autre a fait son temps et par l'effet de la complication de l'orchestre moderne impose au public une fatigue intolérable qui explique l'échec de tous les nouveaux ouvrages de ce genre (d'Indy etc.). [...] La vérité est dans le retour à la tragédie lyrique telle que l'avaient conçue Eschyle et Euripide où le chant n'intervient (chœur ou soliste) que lorsque l'intensité du sentiment ou le pathétique de la situation le commande. Je plains les critiques qui n'admirent pas cette admirable forme d'art, sur le coeur humain, de l'individu et de la foule (24th of August 1928).

The move, then, was towards a depiction of Greece which stressed its moderated beauty and dignity, rather than the overt complexity of *Grèce nietzschéenne* as had been the fashion among German composers, particularly Wagner. It is important, too, that Reinach and Emmanuel viewed their own opera as a return to "lyric tragedy as Aeschylus and Euripides conceived of it". Their focus was not only to be authentic insofar as a French musical imitation of Greek tragedy could be authentic, but also to provide the audience with what one might call a scholarly reconstruction of ancient Greek music placed within an otherwise generically formal latter nineteenth century opera. In other words, Emmanuel's music "grafted the new with the old", as his obituary finely expressed it.[61]

Emmanuel's interests were not confined to ancient Greek metre alone. He was also fascinated by Indic metres and by Hindu musical modes.[62] This may owe something to the prevalent academic movements of the time; for instance, Antoine Meillet's work on the history and structure of Indo-European languages, and in particular the place of Greek within the Indo-European tradition. Both were members of *l'Association pour l'Encouragement des Études Grecques*, and their names appear together in a membership list of 1921,[63] when Emmanuel was a professor at the Conservatoire and Meillet at the Collège de France; in that same edition, their papers appear together,[64] and it is likely that they were familiar with one another if only in a professional sense. In 1920 Emmanuel published his *Sonatine pour piano no. 4 sur des modes hindous*. This little piece, though seemingly irrelevant to Greek metrics, was in fact part of

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61   Stewart 1938, 280.

62   See Defrance 1994, 202.

63   See their entries in the membership list of the *Revue des Études Grecques* 32 (1921), xxiii, xviii.

64   Meillet 1921; Emmanuel 1921.

Emmanuel's conception of ancient music: namely, that ancient music could be used to create a new music, freed from the restrictions of accepted norms.[65]

Emmanuel's neoclassical modernism eventually became part of mainstream musical developments in France. Emmanuel, however, was one of the early instigators of this new, anti-Wagnerian approach to Greek music and drama. It was followed by composers such as Debussy, who today have wider fame. In 1926 Emmanuel wrote an essay entitled *Le Rhythme: d'Euripide à Debussy* (Emmanuel 1926a), which argued that Debussy's rhythmic liberation from Wagner was analogous to that of Euripides from Aeschylus. In another work, a study of Debussy's *Pelléas et Mélisande*,[66] he built up a theory of Darwinian musical progression whereby the best music of modernity would have its roots in, and be based upon, ancient Greek models.[67] In an early work, for instance, Emmanuel had written: "dans l'éternel tournoiement des siècles elles reviennent, discrètes, sans imposer à notre vanité le joug des vieilles choses ... elles nous laissent créer du vieux neuf".[68] In Emmanuel's conception, Greek culture would always be 'new', continually recreated and reformed by modernism. Debussy also adhered to this belief and considered Greek culture a vital influence for all the arts; but the vision of Greek culture put forward in *Pelléas et Mélisande* is based more on exotic melodies than on Greek metre and rhythms: it looks especially to the 'Greek' ideas espoused by Mallarmé, such as the return to the exotic whole tones which were thought to have a link to the music of the Greeks.[69]

Like Emmanuel, Igor Stravinsky (1882-1971) was also interested in ancient rhythm. His opera *Oedipus Rex*, though sung in Latin, is based on a translation from the original Greek, and Stravinsky indicated that he had the Greek rather than the Latin in mind when setting the verse to music.[70] Stravinsky's scansion of the Latin was considered unorthodox by many critics.[71] Stravinsky himself provided them with a reason: he had versified according to the Greek rather than the Latin metre, and so had the absent rather than the present language in mind:[72]

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65   Defrance 1994.

66   Emmanuel 1926b.

67   Corbier 2006, 201-12.

68   Emmanuel 1911, 572.

69   McCombie 2003, 164f.

70   Dayan 2011.

71   Stravinsky 1949, vi.

72   Stravinsky 1963, 31; Dayan 2011, 121.

> Criticism should [...] analyze the nature of the music's rhythmic man-
> ners, the hint for which came from Sophocles himself or, more precisely,
> from the metres of the chorus (especially the simple choriambics, the
> anapaests and dactyls rather than the glyconics and dochmii). No one
> seems to have noticed that where Sophocles has used what may be called
> a 3/8 rhythm I have used the 6/8, and that just as his chorus sings of the
> gods in 4/4 dactyls, my Creon, who is on the side of the gods, sings in
> the same metre.

The main reason Stravinsky decided to use a Latin libretto rather than a Greek
one is that he believed he "had no notion of how to treat Greek musically".[73]

Stravinsky's fascination with Greek metre was predicated on the idea that
poetry and music share a fundamental unity. Hearing W.B. Yeats reading his
own poetry on a phonographic record, Stravinsky was alert to the resemblanc-
es between poetic time and musical time: "Yeats pauses at the end of each
line, he dwells a precise time on and in between words—one could as easily
notate his verses in musical rhythm and scan them in poetic metres".[74] From
this point on, versification and metre became important to Stravinsky's con-
ception of music; of his ballet *Apollo*, Stravinsky noted that its real subject was
"versification, which implies something arbitrary and artificial to most people,
though to me art is arbitrary and must be artificial ... the basic rhythmic pat-
terns are iambic, and the individual dances may be thought of as variations of
the reversible dotted-rhythm iamb ...".[75]

One example of Stravinsky's reliance on Greek metre comes early in
Oedipus Rex. In Act I Scene 1, the chorus implores Oedipus to help ward off
plague and disaster from the city. As in Emmanuel's *Salamine*, the support-
ing music is based around features which closely resemble iambic trimeter.
It seems that Stravinsky reflects the Greek text both through vocal parts and
through instruments: the steady quavers of the vocal part suggest the relent-
less beat of iambs, as do the 6/8 times in the timpani, harp and piano.[76] This
system allowed Stravinsky to reflect the original Greek text of *Oedipus Rex* in
his music, without having to undertake the difficult task of making performers
sing ancient Greek. Both Emmanuel and Stravinsky were important influences
on Olivier Messiaen, whose adaptions of classical poetic metres into his music
are perhaps the most well-known.

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73   Dayan 2011, 121.
74   Stravinsky and Craft 1980, 120. Cf. Albright 1989, 39-40.
75   Albright 1989, 40.
76   Cf. West 1992, 138.

Messiaen studied music with Maurice Emmanuel and Marcel Dupré. Emmanuel we have already met. Dupré was Messiaen's organ teacher; he was also fascinated by Greek rhythms, and required his students to be able to improvise on them as part of his teaching method.[77] In his *Traité d'improvisation* (1926), Dupré outlines numerous rhythmic exercises for the organ, some of which seem to have unstated parallels in Greek metre. From these teachers, then, Messiaen gained a solid foundation in the principles of Greek metre and ancient rhythm. (From Emmanuel, he also learnt about Hindu modes and rhythms).[78]

It is said that Messiaen carried a briefcase of notes on Greek metre with him everywhere he went.[79] How did he relate Greek metre to the Western musical tradition? There is an interesting anecdote, preserved by Boivin, about Messiaen's method of teaching Greek metre:[80]

> Classnotes taken by meticulous students correspond to Messiaen's presentation in the first book of the *Traité*, which takes up nearly 200 pages of the 375-page volume. In classes, using a pencil, Messiaen tapped out successive rhythms on the edge of the piano and explained their structure and their distinguishing features. He also insisted on the survival of Greek metre in Western music … In various scores, including his own, he pinpointed rhythmic formulas which, broken down into sections, corresponded to Greek metre, in themselves subject to inversion, variation or conversion. One simple example is heard at the beginning of the Allegretto of Beethoven's Seventh Symphony. The familiar and insistent motive is viewed by Messiaen as a dactyl followed by a spondee.

In an essay which prefaced an edition of Emmanuel's *L'histoire de la langue musicale*, he outlines the influence of Greek metrical studies on his own music. He notes that Emmanuel's ideas of mode and rhythm changed the way he approached composition: in particular, he stresses the importance of Emmanuel's emphasis on the possibility of rejecting bar-lines and major tonalities in favour of Greek metric patterns and plainchant modes. Messiaen also describes the compositions by Emmanuel that shaped his musical formation: the *Sonatine sur des modes hindous*, the Aeschylean opera *Salamine*, and *Trente chansons*

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77   Pople 1998, 3.

78   Rischin 2006, 52.

79   Dingle 2013, 48. Further information on rhythm in Messiaen's music can be found in Escande 2006.

80   Boivin 2007, 149.

Bourguignonnes du Pays de Beaune.[81] Judging from the importance of Greek metre to his musical development, one might think that Messiaen had studied the classical languages or had obtained a solid grounding in Greek metre; both are misleading positions. Messiaen never learnt Greek; moreover, he only studied Greek metre under Emmanuel for one year. His knowledge of Greek metre relied on French manuals on the subject, especially the works of his teacher Emmanuel; he was content with metrical transcriptions, seemingly unconcerned by the further complexities presented by the original texts.[82] Yet all his life he continued to be fascinated by ancient metrics, believing them to show the way forward for the emancipation of music from traditional western rhythms.[83]

How, then, did Messiaen apply Greek metre to music? Fortunately, we have Messiaen's own words on the matter: "Greek metres rely on a simple and essential principle: they are composed of shorts and longs: the shorts are all equal and a long equals two shorts…. Metre is quite simply the grouping of two feet, the foot being a rhythm composed of a certain number of short and long values each having a precise name".[84] Messiaen is here stating the theory in its most simple form. The notion that long metrical symbols equal long notes and short metrical symbols equal shorter notes is easiest to apply in performance, as earlier theorists had discovered. Other evidence shows that Messiaen's understanding was far more sophisticated than his words above imply. It is clear that for Messiaen Greek metre is not simply a binary rhythmic system. In the tenth movement of the *Turangalila-Symphonie*, for instance, one finds a glyconic metre which Messiaen did not even realise he had written.[85] Mâche rightly points out that in this example the Greek metrical system has once again become 'creative', in that it has been fully assimilated into Messiaen's rhythmic style. Elsewhere, in the *Messe de la Pentecôte*, different metres obtain relative representations in the music: this means that a short in one context (for instance in a slower movement) can be longer than a short in another context (for instance in a faster movement).

Nevertheless, one should remember that Greek metre does not have an obvious presence in Messiaen's music. It is unlikely (but not impossible) that a member of the audience would listen to one of his works and immediately recognize a rhythm taken from Greek metre. Instead, Greek metre is assimilated

81 Messiaen 1981 = Benitez 2008, 59.

82 Boivin 2007, 155.

83 Pople 1998, 3.

84 Pople 1998, 3.

85 Mâche 1992, 70.

into the structure of Messiaen's music.[86] To be sure, the metrical patterns are there; but they are often dispersed between instruments, dynamics, and timbres. In the tenth movement of the *Turangalila-Symphonie*, for example, Messiaen has short bursts of silence stand for the short beats. Or in *Ile de feu no. 1*, he creates a metre resembling but not equivalent to a choriambic dimetre.[87] Or again in *Chronochromie*, Messiaen imperfectly provides a strophic form and does not attempt to perfectly align different metres to their proper places. This last work had a specific purpose: to colour time, as its title implies. The score has two strophes; in each of which there are interversions of a sequence of thirty-two durations, the strophe having one set of birdsong, the antistrophe having a different set. The final epode is a conglomeration of all eighteen birdsongs set out for solo strings. This was not the first time Messiaen had used this pattern: it also appeared in *Le Chocard des alpes*, one of the works in his bird catalogue, and it has clear overtones of Greek drama. Overall, the glyconic, in various forms depending on placement, is the metre most used by Messiaen.[88] (For this reason, one might even describe Messiaen's rhythmic choices as 'Aeolic'). Moreover, in the seventh movement of the *Quatuor pour la Fin du Temps*, one finds a unique synthesis of rhythmic organization derived from ancient Greek metres, Hindu decî-tâlas, medieval plainsong, and from modern composers such as Debussy and Stravinsky; there is also a clear predilection for prime number rhythmic sequences and rejection of the standard concepts of the musical organization of time in a bar:[89] for this reason the words 'pour la fin du temps' refer as much to the end of musical time as to the conventional sense of a biblical end of time.[90] There is, then, an interesting connection to the Greek dramatists and poets in his music, one that might strike some as a latent wish to reunite music, literature, and dramatic performance once more.

It is worth investigating this last point in more detail. Precisely, what were Messiaen's motivations for providing his music with an immensely complex rhythmic superstructure which might be understood by few listeners? The question might best be approached by way of a reviewer, Suzanne Demarquez, commenting on Messiaen's *Oiseaux exotiques*:[91]

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86   See especially Krastewa 1972.

87   Mâche 1992, 70.

88   Mâche 1992, 71.

89   Smallman 1994, 173.

90   Smallman 1994, 173.

91   Hill and Simeone 2007, 82.

Three new works [...] justified the large audience at this third concert. The short work by Messiaen, written for piano, a small orchestra of wind and numerous percussion instruments, uses birdsong as he did in the important symphony played two years ago by the Orchestre national [i.e. *Turangalila-Symphonie*]. This time, he is concerned with exotic birds, and the descriptions by the composer, presented in the programme book, are evocative of a poetic enchantment that straight away suggests a veritable euphony, judging by what it says. We are promised 'varied warblings' of the golden-backed woodpecker from Java, the 'singular cries' of the Indian minah bird, the 'very shrill song' of the red cardinal from Virginia ... All this is realized with the help of Greek and Hindu rhythms, and of a fairy-tale world of sound, a scene brought to life with prodigious variety, orchestrated with a mastery that is filled with magic.

On the one hand, then, Messiaen is returning his music to nature by incorporating birdsong elements. On the other, however, he is adding highly theoretical Greek rhythmic structures which seem to be artificial rather than 'natural'. Messiaen himself provides the best explanation for the combination:[92]

[T]he rhythms of India and Greece [...] give the whole work its implacable course, and [...] bring it back (willingly or not) from the pure realm of singing nature to that of suffering humanity, humanity which shares, however it may, in the vibration of the Universe.

In short, Messiaen's use of Greek metre was symbolic as well as functional. Just as ancient authors had used metres to provide subtle shades of meaning, so too did Messiaen; but in doing so, Messiaen could also subvert two thousand years of western musical developments to find his special form of musical novelty. For the reasons we have observed, it is remarkable that Messiaen's intent to free music from the strictures of the 'bar' and dominant-tonic resolutions was largely based on an ancient method of musical structure. Greek metrics therefore offered Messiaen the rhythmic mobility necessary for such a change.[93] Few others have assimilated Greek metre into their music with such original and historically significant results.

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92   Hill and Simeone 2007, 62.

93   See Escande 2006.

4   Recent Developments: Late Twentieth and Early Twenty-First
        Century

By the end of the twentieth century, the classical metres had an increasingly
diminished influence on western music theory. The terminology of Greek and
Roman metre appeared infrequently in scholarship on music theory, usually
in connection with rhythm, and this seems to have been a dying remnant of
rhythmic conceptions of music which had originated in the Renaissance.

    One example of this is Cooper and Meyer's *The Rhythmic Structure of Music*
(1960). Without even mentioning the influence of classical metrical terminol-
ogy, this work used terms such as trochee and iamb to explain basic rhythmic
patterns.[94] As the foundation for their theory of rhythm, they pointed out the
oddness of using poetic feet to describe analytically rhythmic patterns:[95]

> The use of poetic feet to analyze rhythmic patterns is somewhat unusual.
> Rhythmic groupings have generally been treated as if they were met-
> ric units. However, since these groups can be found in various different
> meters they are not themselves the same as meters. An account of the
> theoretical basis for the viewpoint advanced here is beyond the scope of
> this book. We can but ask the reader, at least provisionally, to accept this
> viewpoint and hope that he will find it justified by the understanding
> which it yields.

Cooper and Meyer were following a long scholarly tradition, described in de-
tail in the above pages, in which poetic feet were also used to analyse rhythmic
patterns.[96] According to Cooper and Meyer's theory of rhythm, there are five
basic rhythmic groupings: iamb, anapaest, trochee, dactyl, and amphibrach,[97]
all of which are a combination of strong (equivalent to a long syllable) and
weak (equivalent to a short syllable) accents. These 'groupings' make up the
more extensive rhythmic structures of music, such as phrases and periods,
as well as more minor rhythmic patterns, such as the movements between
individual notes or brief ornamentations.[98] The approach taken by Cooper
and Meyer is otherwise very uncommon in the second half of the twentieth

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94   E.g., Cooper and Meyer 1960, 12.
95   Cooper and Meyer 1960, 7.
96   Their decision not to offer an explanation for the practice is puzzling, but perhaps they
      assumed that it was irrelevant for the points which they wished to make.
97   Cooper and Meyer 1960, 6.
98   Cooper and Meyer 1960, 6, 57 (for an explanatory figure).

century,[99] though Christopher Hasty revived some eighteenth-century theories about rhythm that were based on Plato in his interesting study *Meter as Rhythm* (1997).[100]

Some living composers have made use of classical metre in their compositions. François-Bernard Mâche, a student of Messiaen, wrote a number of musical works which were influenced by ancient Greek poetry. In his composition *Safous Mele* (1959), the poetry of Sappho is set in Greek to music, with the Greek phonetically transliterated into roman characters. Mâche stated that Greek metre served as the basis for the melody and rhythm of the piece: "The Greek metre in effect provides a melodico-rhythmic schema of two pitches and two durations ... While the melody preserves the essence of this schema, the accompaniment rests on the following phonetic correspondences, largely a matter of convention, and often even arbitrary".[101] Mâche thus used the language of Sappho, its internal rhythms and sound-patterns, to serve as inspiration for the essential structure of his music. The most recent example of Greek metre used in music in a new composition, however, can be found in the work of Roxanna Panufnik, a British composer who is the daughter of the Polish conductor and composer Sir Andrzej Panufnik. In 2003 Panufnik was commissioned by the English National Ballet to write a ballet on the myth of Leda, and wishing to depict Greek dance accurately she consulted Martin West on the essential principles of Greek music. In a newspaper interview, Panufnik said that she wanted "to understand the structures of Greek dance, the equivalent of our minuets and so on, and to understand their principles of melody, rhythm and modes, which were quite different from ours ... It was pretty funky stuff, with a kind of rhythmic wildness that didn't appear again in western music until the beginning of the 20th century". Unfortunately, the ballet was never performed because the English National Ballet ran out of funds. Panufnik was later asked by Robert Thicknesse to set to music part of Oliver Taplin's translation of the final chorus of Sophocles' *Oedipus Rex*. In this work, Panufnik decided to use a dochmiac rhythm to portray the emotion of the original text, and the resulting piece—performed by a fifteen man chorus accompanied by an aulete— supposedly conveyed quite realistically the way in which a Greek tragic chorus might have sung, with Panufnik and Taplin apparently agreeing that the music very probably determined how the chorus might have danced.[102]

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99   For an overview, see London 2008.

100   Hasty 1997, 10, 11, 26.

101   Mâche 1992, 65.

102   For the information on Panufnik, see Thicknesse 2006. A performance of the 2006 work
        for chorus was broadcast on BBC Radio 4 on 11 July 2006.

Conclusions

From the seventeenth to the mid-nineteenth century, the classical poetic metres served a crucial role in the development of music theory in the European scholarly tradition; they allowed scholars and musicians to analyse music according to poetic terminology, and gave them a language with which to do so. This was a continuation of trends in scholarship which had begun when Byzantine scholars brought their knowledge of Greek metre and music to Italy. But the prominent role of classical metre in western music theory does not appear to have been widely influential on the composition of music in this period, except in a few rare cases. At the end of the nineteenth century, some prominent neoclassical and modernist composers attempted to revive classical poetic metres in order to give their music original, exotic rhythms; but usually this approach was limited to composers who had knowledge of the classical languages or were trained under scholar-composers. It is likely that the demise of the classical education in the twentieth century also contributed to Greek and Roman metre's lessening prominence in European classical music. Thus at the end of the twentieth century and the beginning of the twenty-first, the tradition of incorporating classical poetic metres into European musical theory and composition has all but disappeared, save for some scholarly attempts to recreate Greek music.

Bibliography

Albright, D. (1989). *Stravinsky. The Music Box and the Nightingale*. New York [etc.]: Gordon and Breach.

Balsem, A.C. (2012). Collecting the Ultimate Scholar's Library: The Bibliotheca Vossiana. In: E. Jorink and D. van Miert, eds, *Isaac Vossius (1618-1689) between Science and Scholarship*, Leiden: Brill, pp. 281-310.

Benitez, V.P. (2008). *Olivier Messiaen: A Research and Information Guide*. London/New York: Routledge.

Bianconi, L. (1987). *Music in the Seventeenth Century*. Cambridge: Cambridge University Press.

Böckh, A. (1842). Über die Darstellung der Antigone. In: F. Förster, A. Böckh and E.H. Toelken, eds, *Über die Antigone des Sophokles und ihre Darstellung auf dem Königl. Schloßtheater im neuen Palais bei Sanssouci*, Berlin: E.H. Schroeder, pp. 74-97.

Boivin, J. (2007). Musical Analysis According to Messiaen: A Critical View of a Most Original Approach. In: C. Dingle and N. Simeone, eds, *Olivier Messiaen: Music, Art and Literature*, London: Routdledge, pp. 137-57.

Callcott, J. (1806). *A Musical Grammar in Four Parts : 1. Notations, 2. Melody, 3. Harmony, 4. Rhythm.* London: Robert Birchall.

Caplin,. W.E. (2008). Theories of Musical Rhythm in the Eighteenth and Nineteenth Centuries. In: T. Christensen, ed., *The Cambridge History of Western Music Theory*, Cambridge: Cambridge University Press, pp. 657-94.

Combarieu, J. (1897). *Théorie du rhythme dans la composition moderne, d'après la doctrine antique.* Paris: Picard.

Cooper, G. and Meyer, L.B. (1960). *The Rhythmic Structure of Music.* Chicago: University of Chicago.

Corbier, C. (2009). Alogia et eurythmie chez Nietzsche. *Nietzsche–Studien* 38, pp. 1-38.

Croiset, A. (1880). *La Poésie de Pindare et les lois du lyrisme grec.* Paris: Hachette.

Dahlhaus, C. (1991). *Ludwig van Beethoven: Approaches to his Music.* Translated by M. Whittall. Oxford: Clarendon Press (German edition: Dahlhaus, C. [1987]. *Ludwig van Beethoven und seine Zeit.* Laaber: Laaber Verlag).

Damschroder, D. and Williams D.R. (1990). *Music Theory from Zarlino to Schenker: A Bibliography and Guide.* Stuyvesant: Pendragon Press.

David, A.P. (2006). *The Dance of the Muses: Choral Theory and Ancient Greek Poetics.* New York: Oxford University Press.

Dayan, P. (2011). *Art as Music, Music as Poetry, Poetry as Art: From Whistler to Stravinsky and Beyond.* Farnham and Burlington: Ashgate.

De Ruiter, J. (1989). *Der Charakterbegriff in der Musik: Studien zur deutschen Ästhetik der Instrumentalmusik 1740-1850.* Stuttgart: Franz Steiner Verlag (= *Archiv für Musikwissenschaft* 29).

Defrance, Y. (1994). Exotisme et esthétique musicale en France: Approche socio-historique. *Cahiers de musiques traditionnelles* 7, pp. 191-210.

Devrient, E. (1869). *Meine Erinnerungen an Felix Mendelssohn-Bartholdy und seine Brief an mich.* Leipzig: Weber.

Dingle, C. (2013). *Messiaen's Final Works.* London/New York: Routdledge.

Dupré, M. (1926). *Traité d'improvisation à l'orgue.* Paris: Leduc.

Emmanuel, M. (1896). *La Danse grecque antique d'après les monuments figurés.* Paris: Librairie Hachette.

Emmanuel, M. (1911). *Histoire de la langue musicale*, 2 vols. Paris: Renouard.

Emmanuel, M. (1921). Le corps de l'harmonie d'après Aristote. REG 32, pp. 179-89.

Emmanuel, M. (1926a). Le rhythme d'Euripide à Debussy. In: A. Pfrimmer, ed., *Compte rendu du 1er Congrès du rythme: tenu à Genève du 16 au 18 août 1926*, Genève: Institut Jaques-Dalcroze, pp. 103-46.

Emmanuel, M. (1926b). *Pelléas et Mélisande de Claude Debussy: étude historique et critique, analyse musicale*. Paris: Paul Mellottee.

Emmanuel, M. (1937). The Creation of the Violin and Its Consequences. *The Musical Quarterly* 23.4, pp. 509-15.

Escande, D. (2006). Le personnage rhythmique dans l'oeuvre de Henri Matisse et d'Olivier Messiaen. In: M. Barbe, ed., *Musique et arts plastiques: analogies et interférences*, Paris: Presses de l'Université Paris-Sorbonne, pp. 189-99.

Ewans, M. (1982). *Wagner and Aeschylus: The Ring and the Oresteia*. Cambridge: Cambridge University Press.

Fletcher, J. (1968). Athanasius Kircher and the Distribution of His Books. *The Library* 23.2, pp. 108-17.

Fletcher, J.E. (2011). *A Study of the Life and Works of Athanasius Kircher, 'Germanus Incredibilis'*. Leiden: Brill.

Foster, D.H. (2010). *Wagner's Ring Cycle and the Greeks*. Cambridge: Cambridge University Press.

Gallo, F. (1989). Die Kenntnis der griechischen Theoretikerquellen in der italienische Renaissance. In: F. Gallo, ed., *Geschichte der Musiktheorie VII*: *Italienische Musiktheorie im 16. und 17. Jahrhundert, Antikenrezeption und Satzlehre*, Darmstadt: Wissenschaftliche Buchgesellschaft, pp. 7-38.

Geary, J. (2006). Reinventing the Past: Mendelssohn's *Antigone* and the Creation of an Ancient Greek Musical Language. *The Journal of Musicology* 23.2, pp. 187-226.

Geary, J. (2014). *The Politics of Appropriation: German Romantic Music and the Ancient Greek Legacy*. Oxford: Oxford University Press.

Gevaert, F.-A. (1875). *Histoire et théorie de la musique de l'antiquité*. Gand: Typographie C. Annoot-Braeckman.

Hasty, C.F. (1997). *Meter as Rhythm*. Oxford: Oxford University Press.

Havet, L. and Reinach, T. (1894). Une ligne de musique antique. *REG* 7, pp. 196-203.

Hegel, G.W.F. (1965). *Ästhetik*, ed. F. Bassenge, 2 vols. Berlin: Aufbau.

Hill, P., Simeone, N. (2007). *Olivier Messiaen: Oiseaux exotiques*. London: Routledge.

Hiller, J.A. (1774). *Anweisung zum musikalisch-richtigen Gesange, mit hinlänglichen Exempeln erläutert*. Leipzig: Johann Friedrich Junius.

Houle, G. (1987). *Meter in Music, 1600-1800*. Bloomington: Indiana University Press.

Kircher, A. (1640). *Musurgia Uniuersalis, sive Ars Magna Consoni et Dissoni*, 2 vols. Rome: Lodovico Grignani.

Körner, C.G. (1795). *Über Charakterdarstellung in der Musik*. Repr. in Seifert, W. 1960. *Christian Gottfried Körner: Ein Musikästhetiker der deutschen Klassik*, Regensburg: Gustav Bosse, pp. 147-58.

Krastewa, I. (1972). *Le langage rhythmique d'Olivier Messiaen et la metrique ancienne grecque*. Schweizerische Muzikzeitung/Revue musicale suisse 112.2, pp. 79-86.

Lloyd-Jones, H. (1982). *Blood for Ghosts: Classical Influences in the Nineteenth and Twentieth Centuries*. London: Duckworth.

London, J. (2008). *Rhythm in Twentieth-Century Theory*. In: Christensen, T. (ed.), *The Cambridge History of Western Music Theory*, Cambridge: Cambridge University Press, pp. 695-725.

Mace, D. (1997). *Literature and Music*. In: Nisbet, H.B., Rawson, C., eds, *The Cambridge History of Literary Criticism*. Volume 4: *The Eighteenth Century*, Cambridge: Cambridge University Press, pp. 719-29.

Mâche, F-B. (1992). *Music, Myth and Nature, or The Dolphins of Arion*. English Edition, Revised and Updated, trans. Susan Delaney. Chur: Harwood Academic Publishers.

Marpurg, F.W. (1758). *Anleitung zur Singcomposition*. Berlin: Gottlieb August Lange.

Mattheson, J. (1739). *Der volkommene Capellmeister*. Hamburg: Christian Herold.

McCombie, E. (2003). *Mallarmé and Debussy: Unheard Music, Unseen Text*. Oxford: Clarendon.

McKay, J.Z. (2012). *Universal Music-Making: Athanasius Kircher and Musical Thought in the Seventeenth Century*. Doctoral Dissertation, Harvard University.

Meillet, A. (1921). Le nom de Calypso et la formation désidérative. *REG* 32, pp. 384-7.

Mersenne, M. (1636). *Harmonie Universelle, contenant la théorie et la pratique de la musique*. Paris: Cramoisy.

Messiaen, O. (1981). *Olivier Messiaen parle de Maurice Emmanuel* (*Preface*). In: M. Emmanuel, *L'histoire de la langue musicale*, vol. 1. *Antiquité—Moyen Age*. Paris: Henri Laurens.

Panegyres, K. (2016). Classical Metre and the Music of the Renaissance. *Greek and Roman Musical Studies* 4.1, pp. 126-53.

Pangrazi, T. (2009). *La* Musurgia Uniuersalis *di Athanasius Kircher: contenuti, fonti, terminologia*. Florence: Olschki.

Parker, L.P.E. (1997). *The Songs of Aristophanes*. Oxford: Clarendon.

Plantade, E. (2007). Isaac Vossius, Gottfried Hermann et l'Ictus Vocal. *RhM* 150.3, pp. 407-23.

Pople, A. (1998). *Messiaen: Quatuor pour la fin du Temps*. Cambridge: Cambridge University Press.

Prange, M. (2013). *Nietzsche, Wagner, Europe*. Berlin: De Gruyter.

Printz, W.C. (1696). *Phrynidis Mytilenaei Oder des Satyrischen Componisten*, 3 vols. Dresden/Leipzig: Johann Christoff Mieth & Johann Christoph Zimmermann (Johann Riedel/C.S. Hoff-Buchdrucker).

Rischin, R. (2006). *For the End of Time: The Story of the Messiaen Quartet*. Ithaca, NY: Cornell University Press.

Rousseau, J.-J. (1768). *Dictionnaire de musique*. Paris: Vve Duchesne.

Scharlau, U. (1969). *Athanasius Kircher (1601-1680) als Musikschriftsteller: Ein Beitrag zur Musikanschauung des Barock*. Marburg: Görich & Weiershäuser.

Schiller, F. (1795). *Briefe über die ästhetische Erziehung des Menschen*. Tübingen: Cottasche Verlagsbuchhandlung.

Schindler, A. (1996). *Beethoven as I Knew Him: A Biography*. Edited by D.W. MacArdle, translated by C.S. Jolly (German edition: Schindler, A. [1860] *Biographie von Ludwig van Beethoven*. Münster: Aschendorff). New York: Dover Publications, Inc.

Seidel, W. (1975). *Über Rhythmustheorien der Neuzeit*. Bern/Munich: Francke.

Smallman, B. (1994). *The Piano Quartet and Quintet: Style, Structure, and Scoring*. Oxford: Clarendon.

Spieß, M. (1745). *Tractatus Musicus Compositorio-Practicus*. Augsburg: Johann Jacob Lotter.

Stevenson, R. (1959). Maurice Emmanuel: A Belated Apologia. *Music and Letters* 40.2, pp. 154-65.

Stewart, H.F. (1939). Maurice Emmanuel (1862-1938). *Music and Letters* 20.3, pp. 278-80.

Stoneman, R. (1999). *'A Crazy Enterprise': German Translators of Sophocles from Opitz to Böckh*. In: Griffin, J., ed. *Sophocles Revisited: Essays Presented to Sir Hugh Lloyd-Jones*, Oxford: Oxford University Press, pp. 307-29.

Stravinsky, I. (1949). *Oedipus Rex*. New York: Boosey & Hawkes.

Stravinsky, I. (1963). *Dialogues and a Diary*. New York: Doubleday.

Stravinsky, I., Craft, R. (1980). *Conversations with Igor Stravinsky*. Berkeley: University of California Press.

Thicknesse, R. (2006). Greece-The Musical, *Guardian* (7 July 2006).

Verba, C. (1989). Jean-Jacques Rousseau: Radical and Traditional Views in His Dictionnaire de musique, *The Journal of Musicology* 7.3, pp. 308-26.

Vossius, I. (1673). *De poematum cantu et uiribus rhythmi*. Oxford: Theatro Sheldoniano.

West, M.L. (1982). *Greek Metre*. Oxford: Clarendon.

West, M.L. (1992). *Ancient Greek Music*. Oxford: Clarendon.

West, M.L. (2013). *The Transmission of Ancient Greek Music: Then and Now*. In: West, M.L., ed. *Hellenica. Selected Papers on Greek Literature and Thought*: Volume 3, *Philosophy, Music and Metre, Literary Byways, Varia*, Oxford: Oxford University Press, pp. 189-207.

Westphal, R. (1872). *Elemente des musikalischen Rhythmus mit besonderer Rücksicht auf unsere Opern-Musik*. Jena: H. Costenoble.

Westphal, R., Gleditsch, H., and Roßbach, A. (1885-89). *Theorie der musischen Künste der Hellenen*. Leipzig: Teubner.

Westphal, R., Roßbach, A. (1867-68). *Metrik der Griechen im Vereine mit den übrigen musischen Künsten*. Leipzig: Teubner.

Wiehmayer, T. (1797). *Musikalische Rhythmik und Metrik*. Magdeburg: Heinrichshofen.

Wilkes, J. (1819). *Encyclopedia Londiniensis, or Universal Dictionary of Arts, Sciences and Literature*. Vol. XVI, *A Comprehensive Treatise on Music*. London: J. Alard.

Williams, C.F.A. (1893). Ancient Metre and Modern Musical Rhythm. *CR* 7.7, pp. 295-300.

Wilson, N.G. (1992). *From Byzantium to Italy: Greek Studies in the Italian Renaissance*. Baltimore: Johns Hopkins University Press.

Witt, R.G. (2000). *'In the Footsteps of the Ancients': The Origins of Humanism from Lovato to Bruni*. Leiden: Brill.

Abbreviations

KGB	Colli, G., Montinari, M., eds (1967-1988). *Nietzsche Sämtliche Briefe: Kritische Studiensausgabe*. Berlin/New York: De Gruyter.
KGW	Colli, G., Montinari, M., eds (1967-1991). *Nietzsche Werke: Kritische Gesamtausgabe*. Berlin/New York: De Gruyter.
Wagner, *Gesammelte Schriften*	Wagner, R. (1871-83). *Gesammelte Schriften und Dichtungen*, 10 vols. Leipzig: E.W. Fritzsch (repr. Hildesheim 1976).

Book Reviews

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Folch, M.

> *The City and the Stage. Performance, Genre, and Gender in Plato's Laws*, Oxford, Oxford University Press. 2015, xiii, 386 pp. Pr. £ 47.99 (hb). ISBN: 9780190266172

The City and the Stage welcomes its readers warmly: the introduction states the author's aims clearly, situates the book in the context of current scholarship, clarifies its methodology and provides a careful overview of the *Laws* targeted at the non-specialist reader. While the subtitle neatly points to the book's three parts, 'performance' is no doubt the most important notion, and Folch succeeds in presenting a rich account of a Platonic theory of performance, a task made difficult by the lack of a corresponding Greek terminology. Folch is very careful in approaching a dialogue that is both normative and descriptive: while drawing from many different traditions, the *Laws* presents them in a purified and ultimately idealized form.

This 'idealizing' method (*orthē methodos*, 1.638e) allows Plato to build his 'second best city' according to the time-honoured tradition of *mousikē*: while in the *Republic* he is busy making away with traditional poetry and music, in the *Laws* his ambition is to re-program (e.g. 41) them in an old-and-new form. To study Plato's appropriation of Greek musical traditions requires a variety of approaches, with a special focus on historically grounded anthropology. Folch situates his work at the crossroads of different disciplines, and makes good use of such methodological tools as Geertz's search for a middle term between culture and politics (ch. 1: Folch argues that Plato's answer would be the soul) and Schofield's distinction between 'rejectionist' (*Republic*) and 'immanentist' (*Laws*) critique of existing practices (e.g. 32, 150, 157, 230).

Performance is the title of part I, whose two chapters are 'Marionettes of the Soul: Performance and the Psychology of *Mousikē* in Plato's *Laws*' and 'The Chorus and the Critic: Literary Criticism, Theatrocracy and the Performance of Philosophy'. Two more chapters form part II (Genre), namely 'Law's Genres: Hymns, Encomia and the Remaking of Lament' and 'Unideal Genres and the Ideal City: Comedy, Threnody, Tragedy and the Limits of the City Dancing'.

Finally, part III (Gender) comprises chapter 5 on 'Women's Statuses in Plato's *Laws*: Nature, Gender, Law, and the Performance of Citizenship' followed by 6, 'Engendering Harmony: Women's Songs in Plato's *Laws*'. After an interesting Epilogue arguing against the hypothesis that Plato's code was ever intended for choral performance, the book closes with a bibliography and a general index.

Through the lens of performance, Folch explores various aspects of the *Laws*, and has very good points to make on a number of questions: the relevance of books 1-2 to the rest of the work, the coherence of the two-part simile of the marionettes, the "microscopic generic appropriation" (209) of tragedy in the exchange between legislator and tragedian, the continuity of Plato's proposals with historical practices of marginalization of non-citizens, the remarkable role of women in Plato's performance culture (despite the *Laws*' alleged revisionism vis-à-vis the *Republic*) and many more. The convenient umbrella provided by performance ensures that these points are related to one another, yet, it seems to me, the book sometimes lacks argumentative force, insofar as a descriptive mode, prone to repetition and meta-discursive rhetoric, often prevails.

A related problem is that Plato's text is sometimes lost sight of. This is true at a minimal, philological level: for example, Folch's discussion of 'genres of ecstasy' revolves around a section (7.790d-791b) that is "problematic and corrupt" (216), yet Folch provides no close examination of the Greek text, and the reader is left wondering where the problems lie. In a book devoted to one, if very long, dialogue, one would expect a closer engagement with the intricacies of the text. On a more general level, Folch quotes and discusses very few passages from other dialogues (cf. 382). This is surprising because Folch, time and again, emphasizes the *Laws*' 'departures' (a recurrent catchword) from earlier dialogues while also maintaining that "the *Laws* relies on Plato's earlier works for philosophical justification of the positions it assumes" (37). In fact, Folch eventually espouses a rather rigid form of developmentalism. For example, we hear that "according to the psychology of the *Republic*, the lower parts of his [i.e. the good man's] soul will contribute nothing to the process of moral deliberation and action; indeed, he is virtuous precisely because his reason dominates, restrains, and redirects the lower parts of his soul. This analogy is, of course, oversimplified, but it underscores a significant distinction between the two *treatises*" (83, my emphasis). This is to ignore, among other things, a striking passage in the *Republic* that describes the channelling of desires (485d, often compared to Freud's so-called hydraulic model).

While it may be less problematic for the *Laws*, construing the *Republic* as a 'treatise' surely does not help grasp its subtleties. Folch is not oblivious to the risk of oversimplification, and often cites Halliwell's *Aesthetics of Mimesis*,

yet he seems to have little ear for the nuances of the *Republic*'s discussion of poetry, which take centre stage in Halliwell's book. In fact, many of the 'departures' discussed by Folch ultimately depend on a monolithic reading of the *Republic*, as well as on his failure to take into consideration other dialogues (a re-consecration of *mousikē*, for example, can be traced in the *Phaedo* as well as in the *Phaedrus*). Things are not made easier by Folch's lack of familiarity with works not written in English, which amount to less than 5% of his otherwise impressive bibliography. Thus, for example, he ignores Vegetti's monumental commentary on the *Republic*, easily the richest available, and he has limited access to the French anthropologists, which may be damaging for a book that advocates historical anthropology. From another perspective, Folch's almost exclusive reliance on scholarship in English clashes with his celebration of the *Laws* as a multi-cultural enterprise.

The book is well produced, and despite my disagreements I recommend it to both scholars and general readers. With its sustained focus on performance and illuminating discussion of many elusive problems, to which this brief review cannot do justice, *The City and the Stage* is a very welcome addition to the recent flowering of studies on the *Laws*.

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Bibliography

Geertz, C. 1973. *The Interpretation of Cultures*. New York: Basic Books.

Halliwell, S. 2002. *The Aesthetics of Mimesis: Ancient Texts and Modern Problems*. Princeton (NJ): Princeton University Press.

Schofield, M. 2006. *Plato: Political Philosophy*. Oxford: Oxford University Press.

Vegetti, M., ed. 1998-2007. *Platone. La Repubblica*, traduzione e commento. Napoli: Bibliopolis.

Raffa, M. ed.

Claudio Tolemeo, Armonica. Con il Commentario *di Porfirio. Testo greco a fronte.*
Saggio introduttivo, traduzione, note e apparati di Massimo Raffa, Milano, Bompiani
(Il Pensiero Occidentale). 2016, xcviii, 894 pp. Pr. 60.00 euros. ISBN 9788845280917

Ptolemy's *Harmonics* is the most complete extant ancient treatise on musical
theory. Written in the second century CE, the *Harmonics* appears to have been
deeply influenced by the general cultural *milieu* and displays a strong method-
ological commitment to and a profound interest in defining the relation be-
tween sense perception and reason. Therefore, although musical theory would
seem not to be among Porphyry's main interests, it is less surprising than it
might appear at first that the *Harmonics* attracted his attention. Porphyry's
Commentary, however, does not cover the whole of Ptolemy's work, but breaks
off at the end of Ptol. *Harm.* 2.7 and shows more interest in the methodologi-
cal and philosophical passages than in the technical, musicological ones in
Ptolemy's work.

   Both Ptolemy's *Harmonics* and Porphyry's *Commentary* have enjoyed an
enthusiastic revival of interest over the last decades. On the one hand, after
Barker's (1989, 270-391) annotated translation, Solomon (2000) and Raffa (2002)
published new annotated translations, respectively in English and Italian, of
Ptolemy's *Harmonics*, while an edition of the Greek text with Spanish transla-
tion and commentary appeared in Redondo Reyes' PhD thesis (2002). On the
other, a revised Greek text of Porphyry's *Commentary*, with English side-by-
side translation, introduction and notes, has been recently published by Barker
(2015), followed by Raffa's (2016) critical edition.

   It is in this context that Raffa's volume must be placed. Written by a special-
ist in the field of ancient musical theory, it provides a complete Italian transla-
tion of both Ptolemy's *Harmonics* and Porphyry's *Commentary*, preceded by a
thorough introduction and accompanied by notes. The introduction (*Saggio
introduttivo*, xi-xcviii) consists of four sections, along with analytical summa-
ries of the two works and chronological tables.

   The first section (*La scienza armonica greca: razionalità, empirismo e loro
superamento*, xiii-xix) is a beginner's introduction to the purposes and devel-
opment of the ancient science of harmonics, with particular attention to the
opposition of the Pythagorean and Aristoxenian schools of thought, which
shaped the musicological context within which Ptolemy's treatise was written.
The second section (*L'*Armonica *di Claudio Tolemeo*, xx-xxviii) briefly illustrates
the main conceptual features and the methodological affiliation of Ptolemy's
Harmonics. In the third section (*Il* Commentario *di Porfirio*, xxix-lxiii), almost
four times longer than the second one, Raffa tackles many of the key issues

of Porphyry's *Commentary* (e.g. authenticity, date, philosophical background, identification of the dedicatee). Raffa rightly claims that the *Commentary* deserves to be studied in its own right, not only because of the important quotations from earlier writers it contains. Unlike Barker (2015, 3), who maintains that "Porphyry presents his work as a 'commentary' in the strict sense of the word", Raffa seems to assume (xxix-xxx) that the *Commentary* looks rather like a collection of course notes and memoranda for a cycle of lectures, thus implying a didactic purpose—at least in origin—for the work. Raffa's interpretation is possible, although I would not build too much on the title of ὑπόμνημα attested by many manuscripts (xxix-xxx): on the one hand, it seems risky to assume that the manuscript titles must reflect the function intended by the author for the text; on the other, it is questionable whether the ὑπόμνημα of the manuscripts could mean 'collection of notes, memoranda' rather than 'commentary', as usual.

The pages xxxvii-xliii are particularly interesting, although a bit speculative. They slightly rework Raffa 2013 and argue for the identification of the dedicatee of Porphyry's *Commentary* with a Platonist philosopher, named Eudoxius, who is mentioned in a mosaic-inscription from Baalbek. Another noteworthy aspect is Raffa's dating of the *Commentary* after 263 CE (when Porphyry arrived in Rome and first met Plotinus) on the basis of some Plotinian influences he identifies in the much debated gnoseological passage of Porph. *in Harm.* 1.1, 11.4-15.29 Düring (xliii-l). Other interesting points include Raffa's discussion of the unfinished—rather than fragmentary—nature of Porphyry's *Commentary* (l-liii), and his account of Porphyry's peculiar interpretation of the concepts of φωνὴ συνεχής and φωνὴ διαστηματική (liv-lix).

The fourth section of the introduction (*Cenni sulla tradizione testuale*, lxiv-lxxiv) deals with the manuscript tradition and the history of the printed editions of the two texts. Raffa (lxxi) questions Düring's assumption that the manuscript used by Nicephorus Gregoras to prepare his edition of Porphyry's *Commentary*—witnessed by the g-class manuscripts—belonged to class m and perhaps was M (= *Venetus Marcianus app. cl.* VI/10): since no one of the m-class manuscripts provides a text of the commentary to Ptol. *Harm.* 2.1-7, Düring's reconstruction fails to account for the presence of that same portion of Porphyry's text in all but one of the g-class manuscripts. One possible solution, proposed by Mountford (1933, 71), is to suppose that Gregoras had "a complete MS. (now lost) closely related" to M. Raffa instead suggests that Gregoras could have used an antigraph to the m-class manuscripts containing Porphyry's commentary to Ptol. *Harm.* 2.1-7, perhaps the archetype μ itself.

At the end of the introduction, Raffa provides brief but helpful summaries of the chapters of Ptolemy's *Harmonics*, each one followed by an outline of

Porphyry's remarks *ad loc.* in his *Commentary* (lxxv-xciv), and a chronological table of the lives of both Ptolemy and Porphyry (xcv-xcvi). As for this section, it is particularly commendable that Raffa decided to include explanatory diagrams, in order to elucidate the difficulties of some chapters (e.g. xc-xci, summaries of Ptol. *Harm.* 3.5-6, and xciii, summary of Ptol. *Harm.* 3.12).

The Greek text of Ptolemy's *Harmonics* adopted by Raffa is that of Düring 1930, with the emendations proposed by other scholars, especially by Alexanderson (1969). As for Porphyry's *Commentary*, Raffa prints a text based not only on Düring 1932 with others' emendations, but also on his own fresh examination of the manuscript tradition, which also led on to Raffa's (2016) new critical edition for the *Bibliotheca Teubneriana*, published only a few months after his Italian translation. The translation is in general very clear and precise.

The notes are very exhaustive: with their 184 pages (53 for Ptolemy's *Harmonics*, 241-93, and 131 for Porphyry's *Commentary*, 701-831), they address a wide scope of topics, ranging from textual criticism and interpretative problems, to the explanation of the philosophical and musicological concepts involved and the identification of the sources. The volume is concluded with a rich and up-to-date bibliography (835-46) and four indices (of ancient proper names, 847-9; of modern proper names, 851-3; of key concepts and words, 855-8; general index, 859-67).

Raffa's book is a very welcome addition to the literature on ancient musical theory: a slight imbalance between the pages dedicated to Ptolemy and to Porphyry is only a minor flaw. Moreover, this book makes two important documents available to a wider public, not limited to the specialists alone, and has the merit of gathering in a single volume two texts which have not been published and translated together since Wallis' (1699) edition.

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Bibliography

Alexanderson, B. (1969). *Textual Remarks on Ptolemy's Harmonica and Porphyry's Commentary*. Göteborg: Elanders Boktryckeri Aktiebolag.

Barker, A., ed. (1989). *Greek Musical Writings*. Volume II: *Harmonic and Acoustic Theory*. Cambridge: Cambridge University Press.

Barker, A., ed. (2015). *Porphyry's Commentary on Ptolemy's* Harmonics. *A Greek Text and Annotated Translation*. Cambridge: Cambridge University Press.

Düring, I., ed. (1930). *Die Harmonielehre des Klaudios Ptolemaios*. Göteborg: Elanders Boktryckeri Aktiebolag.

Düring, I., ed. (1932). *Porphyrios Kommentar zur Harmonielehre des Ptolemaios*. Göteborg: Elanders Boktryckeri Aktiebolag.

Mountford, J.F. (1933). *Porphyry's Musical Commentary*. Review of Düring (1932). CR 47.2, pp. 70f.

Raffa, M., ed. (2002). La Scienza Armonica *di Claudio Tolemeo. Saggio critico, traduzione e commento*. Messina: Edizioni A. Sfameni (EDAS).

Raffa, M. (2013). *Per chi fu scritto il* Commento *di Porfirio agli* Harmonica *di Tolemeo?* RFIC 141, pp. 361-72.

Raffa, M., ed. (2016). *Porphyrius. Commentarius in Claudii Ptolemaei Harmonica*. Berlin: De Gruyter.

Redondo Reyes, P., ed. (2002). *La* Harmónica *de Claudio Ptolomeo. Edición crítica con introducción, traducción y comentario*. PhD thesis: Universidad de Murcia.

Solomon, J., ed. (2000). *Ptolemy*. Harmonics. *Translation and Commentary*. Leiden/Boston/Köln: Brill.

Wallis, J., ed. (1699). *Operum Mathematicorum Volumen Tertium*. Oxoniae: E theatro Sheldoniano.